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Volume II

TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1963

No. 503

UNITED STATES, APPELLANT,

vs.

PENN-OLIN CHEMICAL COMPANY, ET AL.

APPEAL FROM THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

FILED SEPTEMBER 27, 1963

PROBABLE JURISDICTION NOTED DECEMBER 9, 1963

SUPREME COURT OF THE UNITED STATES

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Volume II

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13—Memorandum from W. C. Gardiner to B. H. Wojcik, dated March 26, 1957	2491	1508
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15—Memorandum from G. R. Evans to A. S. Woodard, dated January 31, 1958	2494	1510
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25—Memorandum from R. R. Shively to W. A. King, dated July 28, 1959	2501	1517
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[fol. 1270] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 206

Pennsalt Chemicals

Plaintiff's Grogan Exhibit 8-A

Subject: Ammonium Perchlorate
Date: February 29, 1960
To: Mr. J. McWhirter
From: G. D. Grogan
Copies To: B24, C20

I wonder if you could find out from Al Clem what our sales policy in the East should be on Ammonium Perchlorate. Who will sell the material produced at Calvert, and what should we do about inquiries in the meantime?

G.

GDG:k

P.S. Shall I go through channels or address Clem direct?

[fol. 1271] Ammonium Perchlorate

March 1, 1960
Mr. G. D. Grogan
J. McWhirter
B24 C20

We presume that you are under the impression Penn-Olin will produce ammonium perchlorate at Calvert, but actually such is not the case. Initially at least, all we contemplate manufacturing is sodium chlorate and sales will be handled through Olin.

There are a multitude of questions to be resolved in connection with the Penn-Olin arrangement and we should have a better concept of the division of responsibility after our preliminary meeting with Olin personnel at Baltimore on March 8th.

Insofar as obtaining information from Al Clem is concerned, we have absolutely no objection to your making direct contact with him, although obviously we should like to be kept informed.

——, ——.

JMcW:ram

[fol. 1272] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 208

March 7, 1960.

Mr. J. O. Logan, Baltimore
JGJ:bd, Baltimore

C. L. Williamson.

Sodium Chlorate Market Projections

Attached is a detailed market projection representing our best estimate of the maximum tonnages we could expect to ship the various categories of sodium chlorate consumers for the years 1962-1964 inclusive. Please note our comments below relative to each market category of consumer:

1) ClO_2 Market Penetration—Taking an estimated 61,000 t.p.a. 1960 sodium chlorate consumption for ClO_2 bleaching in this area, we have projected the maximum share of this market which we believe we can reasonably expect to acquire during the period 1962-1964 inclusive. Consumption data came from OMCC files and it is believed to be both conservative and accurate, although C & E News of 8/31/59 cited 31,000 t.p.a. requirement for ClO_2 pulp bleaching. Each consumer has been studied and an attempt made to give effect to present OMCC sales position, trade relations, record of technical assistance and sales relationship, as well as geographical proximity to competitor shipping points.

2) Increased Utilization Installed ClO_2 Capacity—The relatively small incremental cost of excess ClO_2 generating capacity has led to the installation of larger units which we estimate would require 96,000 t.p.a. sodium chlorate at capacity operation. In a great many instances the oversized generators were installed with future expansion of pulping, bleaching or other mill facilities in mind. We have estimated an increase in consumption averaging 5% per year over the next five years from this source, assigning 1/3 of this tonnage as OMCC potential.

3) New ClO_2 Capacity—Our technical and development people agree that the installation of new ClO_2 units has reached a plateau due to both economical and tech-

nological considerations. Two new units under construction are included in our basic 1960 projection. Two other mills now have ClO_2 under consideration (Bowaters Carolina and Northwest Paper), and a third (Gulf States, Tuscaloosa) is considering relocation and activation of a small unused generator. We have estimated new capacity to average about 5% for 1960 tonnage (3,000 t.p.a.) over the next five year period, assigning 1/3 of this tonnage as OMCC market potential.

4) Miscellaneous Industrial and Agricultural Markets —We are estimating Niagara Falls' captive requirement for sodium chlorate at about 2,000 t.p.a. over the next five years from Calvert City. Various surveys indicate an agricultural and industrial market of 25,000-30,000 t.p.a. for which the largest uses are weed killer preparations, defoliating preparations and chemical manufacturing. We have estimated a very modest penetration of this market during the initial three year period.

Conclusion: Certain risks such as the level of operations in the pulp industry, the effects of general business conditions, and the future of ammonium perchlorate for solid missile fuels could not be evaluated. However, these elements, together with relatively narrow use pattern of sodium chlorate, suggest the desirability of arranging for the broadest possible marketing responsibility in terms of geographical area and end use. We also recommend that arrangements be made for the maximum possible tonnage to be available from Portland during 1960 and 1961 to permit early penetration of desirable accounts and afford sales and technical personnel experience and training.

J. G. Johns.

[fol. 1273] Sodium Chlorate Market Projection

1) ClO_3 Market Penetration (Base Estimated 1960 Sodium Chlorate Consumption Rate)

1960 Consumption by State & Gen. Type				Estimated OMCC Sales Penetration		
State	OMCC Gen.	Sol. Gen.	Total	1962	1963	1964
Md.	2000 t.	— t.	2000 t.	500 t.	1000 t.	1000 t.
Va.	1500	2500	4000	500	1000	1000
N. C.	2500	3700	6200	1000	1500	2000
Tex.	3000	—	3000	500	1000	1000
Ark.	600	3700	4300	1000	1500	1500
Fla.	3700	1200	4900	1000	1500	2000
Ga.	4600	5800	10400	2500	3500	4000
La.	5000	—	5000	1500	2000	2000
Ala.	9000	—	9000	2500	3500	4000
Miss.	6100	—	6100	1500	1500	1500
Wisc.	—	600	600	200	200	200
Mich.	—	900	900	—	—	—
Me.	—	4000	4000	500	500	500
N. Y.	—	600	600	—	—	—
Total	38000	23000	61000	13200	18700	20700
2) Increased Utilization Installed ClO_3 Capacity				2000	1100	1200
3) New ClO_3 cap. @ av. 3000 t. Sodium Chlorate/yr.				2000	1000	1000
Total Est. OMCC Potential, Pulp Bleaching				17200	20800	22900
4) Misc. Ind. & Ag. Markets OMCC				2000	2000	2000
Captive N. F Herbicide and Ag. Formulators Ind. Consumers				700	1000	1500
				500	700	1000
Maximum Estimated OMCC Market Potential				20400	24500	27400
				15000	20	

Figures were proofread.

[fol. 1274] In United States District Court

Plaintiff's Exhibit 209

Penn-Olin—March 8 Meeting
March 9, 1960
E. E. Tuttle
M44-W1

1. Board Meeting:

A record of the first Board Meeting will be documented by the official minutes being prepared by Mr. Williamson. One additional item needed to complete these minutes will

be the text for the desired wording of the bank account resolution for the First Pennsylvania Company. We agreed to send Mr. Williamson this text.

2. Progress Reports:

In general, it was agreed that "Progress Reports" for Penn-Olin will consist of the meetings (and the records thereof) of the Coordination Committee. In addition, there may be formal reports on technical, financial, or legal matters (including those of a very confidential nature). Mr. Williamson had prepared a proposed distribution list for such reports which he agreed to forward to us (Mr. Willits) for our consideration.

3. Power Commitments, Sales Estimates and Plant Size:

Mr. McWhirter mentioned that an immediate problem would be contracting for future power requirements. This raised the question of the "phasing" of the construction of the plant, which in turn, raised the question of probable sales requirements. Mr. Johns reported "maximum estimated potential" sales figures which would call for a larger initial capacity than the originally-planned 10,000 ton-20,000 ton-25,000 ton schedule. Not only were these estimates maximum, but they were also based on chlorate being made available to Olin (either by Washington or some other source) during the 1961 construction period.

Before making any decisions in this area, Olin agreed to [fol. 1275] provide us with "reasonable" estimates of their chlorate needs for 1961 on. This they agreed to do within the next couple of days. We would then review this material in terms of our ability to supply from Washington their 1961 requirements, the power commitment question, and the construction timing question.

4. Method of Penn-Olin Operation

Mr. Logan reported that their thinking had changed on the most desirable method of operation for Penn-Olin. As of now, they were of the opinion that, at the outset, Penn-Olin should consist essentially of "this Board", or in other words, be a "paper" company. In effect, Penn-Olin would contract with Pennsalt to manufacture the chlorate (i.e., all

manufacturing personnel would remain on Pennsalt's payroll) and Penn-Olin would, in turn, contract with Olin to sell the material. All of this, of course, would be subject to "an agreed upon accounting system."

The above is in accord with our thinking but Mr. Logan cautioned that this had not as yet been checked finally with Mr. Block.

5. Preliminary Expenses

It was agreed that, for the time being, we would continue the practice of each company carrying on their own books (but segregating same) the expenses related to Penn-Olin Project. These would be limited to out-of-pocket expenses such as travel, outside legal fees, etc. They would not include salaries.

6. Future Meetings

Mr. Willits was to arrange for a meeting with Olin on financing and Mr. McWhirter was to arrange for a trip to Calvert.

Mr. Wright advised it would not be necessary to hold an Annual Stockholders Meeting this April.

As will be reported in the Board Minutes, the next Board Meeting was set for April 12 at 10:00 AM in Philadelphia.

EET:EF

M44—Per your request, this is what I recall from the meeting.

[fol. 1276] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 210

Olin Mathieson Chemical Corporation

Date: March 9, 1960.

To: Mr. S. de J. Osborne
At 460 Park Avenue
From: Russell Hopkinson
At 460 Park Avenue
Subject: Report of

Sodium Chlorate Evaluation Committee

Copy to: Mr. Edward Block,
Mr. D. W. Drummond,
Mr. W. F. Otterstrom,
Mr. J. E. Williams,
Mr. J. O. Logan,
Mr. C. L. Williamson,
Mr. H. J. Reed,
Mr. J. R. Sanderford,
Mr. L. S. Howe.

A meeting of the above Committee was held today, at which the following were present:

Evaluation Committee:

Russell Hopkinson, Chairman,
Edward Block
D. W. Drummond
W. F. Otterstrom
J. E. Williams

Chemicals Division:

J. O. Logan
C. L. Williamson

Also present:

H. J. Reed
J. R. Sanderford
L. S. Howe

RH—See me pls on my return, SdeJO.

4/26/60.

Stan wants me to call Williamson and explain that he is all for the engineering study but wants it clear that the whole project does not have a go ahead until the CAR covering it has been submitted and signed. Presentation should include studies on 1. Tech Feasibility, 2. Economics, 3. Financing.

The Chemicals Division elaborated on the background and economics of their proposed joint venture with Permsalt and brought us up to date on the status of the investigation by the joint technical team. They also answered a number of questions concerning plant location and market analysis.

RH gave above memo to WMson, 4/26/60.

Mr. Block stated that Mr. Osborne, prior to the appointment of this Committee, had given him approval to proceed, and he therefore assumes that this Committee's responsibility is to examine and endorse Mr. Osborne's action.

No.

From the information at hand, this Committee gives this endorsement on the understanding that the final report of the technical group confirms the estimated net profit on gross investment (9.7%) indicated at this meeting.

Russell Hopkinson, Chairman.

[fol. 1277] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 215

Pennsalt Chemicals

Subject: Sodium Chlorate
Date: March 23, 1960
To: Mr. A. H. Clem
From: G. D. Grogan
Copies to B24, M44, S24, W63

Harry Snolens tells me that Hooker has told some of the textile mills they are developing a simple, practical method for cotton bleacheries to use chlorine dioxide generated from sodium chlorate. I have always understood that this was a real good textile bleaching agent and it could conceivably make some inroads into Hydrogen Peroxide.

If we are going to be able to sell chlorate out of our new plant into the textile field, I think we should start some investigation of this possibility and perhaps talk to Mathieson to see what they have done in the past. On the other hand, if Mathieson is going to have complete control of sales, maybe there isn't much point in our wasting time with it.

Do you suppose there is any way we can work ourselves into selling sodium chlorate to the textile industry and perhaps have nothing to do with the sales to the paper industry?

G

GDG:k

[fol. 1278] Penn-Olin

Sodium Chlorate
March 25, 1960

Mr. G. D. Grogan
A. H. Clem
your memo March 23
M44

Although the Penn-Olin sales agreement with Olin Mathieson has not been finalized I believe the general understanding is that they will be responsible for moving the

output of the plant. We did raise the question regarding areas where Pennsalt may have something to offer regarding distribution, i.e., the agricultural chemicals field. I believe under those circumstances Pennsalt would probably become Olin Mathieson's agent.

If the textile field requires a generation system for producing chlorine dioxide from sodium chlorate then I think Olin Mathieson would be the logical supplier since they would be involved in the technical services, etc., concerning generation of the chlorine dioxide. In other words, I think Pennsalt might fit into the sales act where sodium chlorate is used as such—for example, agricultural chemicals, but when chlorine dioxide generation is involved I think Olin Mathieson is the logical supplier.

AHC/eh

[fol. 1279] Pennsalt Chemicals

Subject: Sodium Chlorate
Date: March 31, 1960
To: Mr. A H. Clem
From: G. D. Grogan
Copies To: L8, M44, M50

I don't think we should let Olin Mathieson elbow us out of the textile chemical use of Sodium Chlorate unless we have no choice about the matter. They have information on chlorine dioxide generation, but we have lots of information on textile bleaching and I feel we could do as good a job as they. It is particularly important to us because the Sodium Chlorate may displace some Hydrogen Peroxide. Maybe we could both sell the stuff into the textile field.

GDG:k G.

[fol. 1280] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 218

Olin Mathieson Chemical Corporation

April 8, 1960.

Mr. N. F. Wilmot, Chicago
Vernon Woodside, Baltimore
Waldorf Paper Products Company
Missoula, Montana
Mr. J. P. Hagan,
Mr. H. S. Hopkins,
Mr. J. G. Johns.

Attached please find a copy of a letter to Mr. Johns from Mr. Hagan which is self-explanatory. We believe that for the best interests of Olin Mathieson we should start the plant up at Missoula with or without the participation of Penn Salt. We are presently working through Dorr Oliver in Hartford, Conn., as indicated by Mr. Hagan's letter.

It would be appreciated if you would follow this up in the St. Paul office of the subject when calls are made there by your men.

In view of our impending production of sodium chlorate, it is imperative that we have installation of our chlorine dioxide process in as many mills as possible and that we do everything within our power to retain and enhance the general acceptance of our process by the paper industry.

I would appreciate your comments.

[fol. 1281] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 220

Extract from—Appropriations Committee Meeting No. 35
Date—April 13, 1960
Members Present—Messrs. Clark, Clem, Drake, LaLande, Tuttle and Willits
Others Present—Messrs. Collins and McWhirter

VI. PSW-75-P—"Sodium Chlorate Plant Expansion" Performance Report

PSW-75 Performance Report M32

1. Actual performance for the year 1959 showed a return of 28.5% versus a claimed return of 46.6%.

2. One of the reasons given for the lower than claimed return was the necessity for making shipments to the East. Since actual production was still less than capacity, however, the Committee requested clarification to the following two points:

a) Could the production diverted to the East actually have been sold in the Pacific Northwest? Also, what is the 1960 budget of production, budget of sales to the East, and budget of sales in the Pacific Northwest?

b) Discounts of $51,869.

[fol. 1282] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 223

Olin Mathieson Chemical Corporation

April 20, 1960.

Mr. R. C. Phillips, Baltimore
JGJ:bd Baltimore
Sodium Chlorate
J. O. Logan,
J. G. McMullen,
C. L. Williamson.

Planning for the Penn-Olin sodium chlorate facility has advanced to the point where it appears that sodium chlorate production will be available from Calvert City the third or fourth quarter of 1961. As you are aware, Olin Mathieson will act as sales agent for Penn-Olin.

I am passing the above information along to you in connection with the Niagara Falls sodium chlorate requirement for 1961. We would like to be in a position to begin supplying this requirement from Calvert City as soon as specification material is available and hope it will be possible for you to negotiate your 1961 contracts with this in mind.

J. G. Johns.

[fol. 1283] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 225

Pennsalt Chemicals Corporation

Three Penn Center Philadelphia 2, Pennsylvania

May 2, 1960.

Messrs. Albert H. Clem, J. G. Johns, W. Alfred LaLande, Jr., John O. Logan, Cecil L. Williamson, W. Cooper Willits, J. L. Wood.

Gentlemen:

Prompted by several random questions recently directly to our attention, we wish to urge the various committees charged with developing programs covering policy and/or procedures for Penn-Olin to schedule preliminary meetings at an early date.

While we fully recognize that all concerned have other major responsibilities, we cannot ignore the fact that if we procrastinate on the development of a sound framework governing Penn-Olin operations, we will not only risk unnecessary confusion, but also jeopardize the overall success of the venture. If we wait until July to give consideration to these matters, some of us may be rocketed into outer space.

The questions which prompted the above admonition had to do with process development work at our Portland plant and a possible overlapping of sales programs. Inasmuch as both of these areas will come under surveillance of pertinent Penn-Olin committees, we have deferred decision pending adoption of an overall program by our Directors.

We would very much appreciate written notification whenever any committee or sub-committee schedules a meeting.

Sincerely, J.Mc.

JMcWhirter
ram
5/13 or 16

[fol. 1284] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 226

Date: May 6, 1960.

To: Mr. J. G. Johns At Baltimore
From: W. H. Brandt At Baltimore
Subject: Sodium Chlorate—Herbicide Market

Copy To V. Woodside

With reference to our discussion of May 4 on sodium chlorate end uses, I propose to do a little more investigation of the herbicide market to round out the picture with respect to drum loading facilities at the plant.

Next week I will go out to Chicago to talk to Nalco and the Association of American Railroads. While there I intend to call upon several marketers of herbicide formulations to determine whether or not they are using sodium chlorate in their operations.

The week of May 16 I will be in New York for the annual meeting of CMRA, May 17 and 18—Hotel Biltmore, and I will spend the balance of the week calling on herbicide formulators in the New York and New Jersey areas. At that time I will contact Chipman at Boundbrook and Reade at Jersey City.

Enclosed are itineraries covering the next two weeks.

W. H. Brandt

/jf
encl.
cc. J. G. McMullen.
7/8/60 vd.

[fol. 1285] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 228

May 18, 1960.

C. H. Larson

Mr. G. M. Cunningham, Pasadena
JGJ:bd, Baltimore
Penn-Olin Chemical Company—Sodium Chlorate

Some time ago you wrote to Bill Theobald inquiring about the availability of chlorates and perchlorates out of Pennsalt's Portland, Oregon plant for sale by you on the West Coast.

While it is possible that such an arrangement can be effected at some time in the future, we do not, for a number of reasons, wish to raise this subject at the present time. Perhaps after Calvert City is in operation and both we and Pennsalt have had an opportunity to examine our sales positions, either OMCC or Penn-Olin will want to make arrangements to handle any surplus that may be available at Portland. Meanwhile, I would suggest that nothing whatsoever be done to create the impression on the part of Pennsalt or West Coast purchasers that we will, or plan, to market these materials from Portland in the West Coast area.

J. G. Johns.

[fol. 1286] Olin Mathieson Chemical Corporation

February 26, 1960.

(Dict. 2/25/60)
To: Mr. O. J. Theobald, Jr. at Baltimore
From: G. M. Cunningham at Pasadena, Calif.
Subject: Penn-Olin Chemical Co.—Sodium Chlorate

Copies To: Johns
2/29

We received the February 15 Public Relations release regarding formation of the above company for production of chlorates and perchlorates at Calvert, Ky.

We assume OMOC will sell part of the production of this plant. Based on this assumption, will we be allowed to sell

chlorates and perchlorates produced by Pennsalt Chemicals at their Portland, Oregon plant? We have some accounts who might be interested in purchasing these chemicals from us. Will you kindly advise our position on the above. We do not think we will be competitive on the Calvert, Ky. production, particularly in the Pacific Northwest.

G. M. Cunningham.

GMC:vll

Handwriting

J. G. Johns:

You had best advise Geo. This is an interesting point as to whether we should sell or could sell PS material in addition to PennOlin Material.

OJT 2/29.

[fol. 1287] In United States District Court

Plantiff's Exhibit 229

Extract from—Appropriations Committee Meeting No. 37
Date—May 26, 1960
Members Present—Messrs. Clark, Clem, Drake, LaLande, Tuttle and Willits
Others Present—Messrs. Lawson, McWhirter and Smith

IV. PSW-075-P—"Sodium Chlorate Plant Expansion"—Additional Information

1. The Performance Report on this project was reviewed at Appropriations Committee Meeting No. 35. In answer to a question raised at that time, Mr. More stated that the "production diverted to the East in 1959 actually could not have been sold in the Pacific Northwest." He also stated that the $51,869 shown as discounts was made up of the following:

Adjustment to Eastern Price Schedule on 1460 tons to Olin Mathieson	$24,831
5% discount allowed on $540,760 sales	27038
	$51,869

[fol. 1288] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 232

Olin Mathieson Chemical Corporation

June 6, 1960.

To: Mr. J. J. Johns at Baltimore
From: W. H. Brandt at Baltimore
Copy To: J. G. McMullen, V. Woodside, Library—Baltimore, Library—New Haven.
Subject: Sodium Chlorate Market Study

Enclosed is a summary report of the information developed in the recent study on sodium chlorate.

If you have any questions or would like to have further information developed, please advise.

W. H. Brandt.

/jf

[fol. 1289] Introduction

In conjunction with the sodium chlorate joint venture of Olin Mathieson and Pennsalt, the General Sales Manager, Heavy Chemicals, asked Market Research to obtain current information concerning the product. Of special interest was the method of shipment, i.e. bulk or containers, to major markets other than the pulp and paper industry.

This brief study has been completed and the results are reported herein.

[fol. 1290] Summary

1. Production of sodium chlorate in 1959 was 87,700 tons as compared to an installed capacity of 100,400 tons.

2. Estimated sodium perchlorate production for 1959 was 17,900 tons. This material is used to manufacture ammonium perchlorate, perchloric acid, other perchlorates and chlorates with the exception of potassium chlorate, which is produced directly.

3. Estimated production of potassium chlorate for 1959 was 5-6000 tons. This material goes almost entirely to the match industry.

4. The estimated end uses for sodium chlorate for 1959 were as follows:

Use	%
Pulp & paper bleaching	38.1
Other chlorates & perchlorates	26.1
Herbicides (weed control)	20.3
Chemical intermediates & processing	4.6
Defoliation (cotton & soybean)	3.1
Metallurgical (ore processing)	2.4
Other uses (bleaching flour, textiles, & fats, dealers, misc. & exports)	5.4

5. The 1959 herbicide market was estimated at 16,500 tons, apportioned as follows:

a. Railroad Weed Control—10,000 tons
b. Noxious Weed Control— 6,500 tons

(croplands—by state regulation)

6. The sodium chlorate purchased by companies servicing railway clearance programs is delivered predominantly in bulk, either by tank car or covered hopper car.

7. Weed control season for railroads runs from April to October with peak business in June.

8. The straight chlorate used in noxious weed control in various states is purchased primarily in 100 pound containers either direct from the producer or through distributors.

[fol. 1291] 9. The special formulations, some containing chlorate, are purchased in 50 and 25 pound containers.

10. The principal area of chlorate usage for noxious weed control is the midwest. The six states below are the major consumers:

State	Rank in Use
Iowa	6
Kansas	1
Minnesota	5
Nebraska	3
Oklahoma	2
South Dakota	4

11. Imports jumped from 1300 tons in 1958 to 2600 tons in 1959. Most of this material is going to one firm, Pacific Engineering Products Co., Henderson, Nevada, for the production of ammonium perchlorate.

12. The current price quoted in Oil Paint & Drug Reporter for sodium chlorate, carload, works, 350 pound drums is 9¢/pound, one hundred pound drums 1/4¢/pound higher. No price is quoted for bulk.

[fol. 1292] Recommendations

Based on the results of this study it is recommended that:

1. Drumming facilities be of nominal size but equipped to handle a variety of container sizes such as 50 pound, 100 pound, 350 pound and even 600 pound.
2. If PennOlin plans to sell to the railroad weed control service companies bulk storage should be sufficient to permit handling heavier shipping schedules in April, May and June.

[fol. 1293] General Discussion

Since the plant capacity of the proposed PennOlin sodium chlorate facility will be large enough that sales outlets other than to the pulp and paper industry will have to be sought, the sales management of heavy chemicals section requested Market Research to obtain up-to-date information concerning the marketing of the product, with particular interest in methods of shipping, so that recommendations could be made to the engineering department concerning drum loading facilities.

It was known from previous study that the principal non-captive market outside of pulp and paper bleaching was herbicides. Consequently the field survey was directed toward this area to develop as much information as possible along the lines mentioned above. Concurrent with this effort general information regarding the total chlorate market was collected so that management would have available the latest data.

The results of the survey will be discussed under the following subheadings:

a. Production
b. Estimated end use pattern
c. Field survey
d. Imports
e. Prices

(a) Production

In a report published in August 1959 the Business and Defense Service Administration had estimated 1959 production of sodium chlorate would be 80,000 tons. Actual production was 87,700 tons. The table below gives a breakdown of information on the various products.

[fol. 1294]

Table I

Product	State & number Plants		Capacity Aug. 1959	Production M Tons '57	'58	'59 (est)	'59 (act)
Sodium Chlorate	Total Plants	5	100,410 tons	59.1	67.25	80	87.7
	Mississippi	2					
	Nevada	1					
	New York	1					
	Oregon	1					
Potassium Chlorate	Total Plants	3	10,300 tons	(a)	(a)	(a)	
	Nevada	1					
	New York	1					
	Oregon	1					
Sodium Perchlorate	Total Plants	5	23,980 tons	(a)	(a)	17,900	(b)
	Mississippi	1					
	Nevada	2					
	New York	1					
	Oregon	1					
Ammonium Perchlorate	Total Plants	4	24,700 tons	(a)	(a)	14,500	(c)
	Mississippi	1					
	Nevada	2					
	Oregon	1					

(a) Statistics and estimates are not shown because data might reveal operations of individual firms.

(b) Tons of sodium chlorate to produce this material must be calculated as an end-use.

(c) Produced from the sodium perchlorate.

In the case of potassium chlorate information was developed that the estimated production for 1959 was 5-6000 tons.

(b) End Use Pattern

In addition to the detailed breakdown of products and producing locations the government report contained an estimated sodium chlorate consumption by end-uses for 1958 and 1959.

In a discussion with BDSA personnel an estimated 1963 end use pattern was also obtained for the major categories. These data are summarized in Table II.

[fol. 1295]

Table II

Use	1958 Tons	1958 Percent	1959 Tons	1959 Percent	1963 Tons
Pulp & paper bleaching	29,000	41.1	31,000*	38.1	45–50,000
Herbicides (weed control)	16,100	22.8	16,500	20.3	17,750
Other chlorates and perchlorates	13,244	18.8	21,252	26.1	20,000
Chemical intermediates and processing	3,600	5.1	3,693	4.6	4,100
Defoliation (cotton and soybeans)	2,300	3.3	2,500	3.1	3,100
Metallurgical	1,846	2.6	1,980**	2.4	3,000
Bleaching (textiles, flour, fats, etc) and dyes	1,148	1.6	1,225	1.5	
Dealers	1,396	2.0	1,434	1.8	
Miscellaneous	1,290	1.8	1,339	1.6	
Export	609	0.9	415	0.5	
Total	70,541	100.0	81,288	100.0	

* Reported to be 34–35,000 tons

** Reported to be 2,500 tons

(c) Field Survey

As a result of information developed through the Department of Commerce the major merchant area to investigate outside of the pulp and paper field was the herbicide market. Consequently field calls were made on formulators of herbicides to determine whether they marketed chlorate containing products and, if so, how they purchased their material.

It was found that herbicide use fell into two major categories:

A. Railroad track right-of-way clearance
B. Weed control programs in a number of states

Discussions with companies involved in railroad clearance pointed up that there are five major companies doing this type of service. They will either furnish the formulation to the railroads or contract to carry out the spraying operation. The companies involved are:

Allied Chem. Corp., Gen. Chemical Div.—New York
R. H. Bogle Co.—Alexandria, Va.
Chipman Chemical Co.—Boundbrook, N.J.
Nalco Chemical Co.—Chicago, Ill.
Reade Manufacturing Co.—Jersey City, N.J.

[fol. 1296] Of the five companies Nalco uses only a small amount of chlorate, having chosen to develop other herbicide systems which they feel are as effective at a comparable cost.

It is estimated that some 10,000 tons of material were consumed in this use in 1959. Reade and Bogle accounted for about 2500 tons and Nalco may have consumed as much as 500 tons. This leaves a minimum balance of 7000 tons to be used by General and Chipman. Based on the information uncovered it is estimated that Chipman accounted for at least 65% of this tonnage.

These companies all purchase the largest part of their chlorate dry in bulk and transfer to liquid storage. In some instances they purchase drummed material to balance out requirements toward the end of the season so as to minimize carry-over inventories.

The season for track clearance runs from April through October depending upon the section of the country and the growing season. However the peak of the business is generally in late May through June.

Approximately 6500 tons of chlorate are estimated to be consumed in weed control programs in the various states. Interviews held with agronomists at Federal and State level revealed that it is being used to control noxious perennial weeds such as Johnson grass and vine weed. The latter grows in clumps in field crops such as wheat and sorghum and is killed by spreading dry chlorate on the infested acreage. No crop is harvested from the treated area but the balance of the field can be used. Chlorate is also used to control weeds on non-croplands and as a soil sterilant around the base of power transmission lines. The general right-of-way for transmission lines requires some selectivity in killing so that grass or some green cover can be left behind. Consequently the phenoxy compounds find use for the overall areas.

[fol. 1297] The heaviest consumption of sodium chlorate is in the six mid-western states of:

	Rank in Use
Iowa	6
Kansas	1
Minnesota	5
Nebraska	3
Oklahoma	2
South Dakota	4

Other states where some chlorate is consumed are:

Colorado	Montana
Indiana	Ohio
Missouri	Wisconsin
Wyoming	

Generally the chlorate is purchased in 100 pound containers, either direct or through distributors.

There has been a tendency to move in the direction of formulated compounds, some of which contain chlorate, that are safer to handle. These products are being packaged in 50 and 25 pound units to permit easier handling at the consumer level. Pressure is being put on the producers of chlorate to make their units smaller also.

Consumption of chlorate in the herbicide field is limited pretty well to the five major railway clearance service companies and in the states where regulations exist on noxious weed control. In some thirteen calls other than the above mentioned not one formulator was found who was marketing a chlorate containing compound. Because most of the herbicide companies are selling to markets where selectivity of kill is required the organic herbicides predominate. A few made sodium arsenite when required to furnish a "total kill" material. It was pointed out that this would be the general situation throughout the country.

[fol. 1298] The only other segment of the merchant market about which any information was developed was the uranium ore processing industry. Here it was found that Pennsalt is shipping a special 600 pound open head drum. They are believed to be the only producer using that particular size drum.

(d) Imports

Import figures were obtained for the last three years and are given below:

Year	Quantity	Av. Price/lb.
1959	2600 tons	5.5¢
1958	1320 tons	5.9¢
1957	331 tons	6.9¢

The price is FOB dock, country of origin and 3/4¢/pound duty must be added. Over 85% of the 1959 imports were from France, the balance were from Sweden. How-

ever, in 1959 59% came from Sweden and in 1957 all material came from Sweden.

The sharp increase in imports can be attributed primarily to one company, Pacific Engineering Products, Henderson, Nevada. According to sources of information in Washington this company is in the ammonium perchlorate business and since it represents a group of dissidents from American Potash as well as Pennsalt they have to go abroad for their sodium chlorate. Thus at this time imports don't appear to be an influencing factor on the domestic market, particularly the pulp and paper area which is PennOlin's primary target.

(e) Prices

The market prices for sodium chlorate as quoted in May 30, 1960 Oil Paint and Drug Reporter are:

[fol. 1299] Sodium Chlorate—crystal, 350 lb drums

c.l., works—$.09/lb.
l.c.l., works—.095/lb.
in 100 lb. drums only—1/4¢/lb. higher

The interesting thing about the above pricing is that no quotations are given for bulk shipments in spite of the fact that the major part of the material is shipped that way. A check with Oil Paint and Drug Reporter revealed that they had never been given a bulk price by the producers. Lack of such a market price indicates that it might be being used as a bargaining tool in the case of major accounts.

[fol. 1300] IN UNITED STATES DISTRICT COURT

PLANTIFF'S EXHIBIT 241

Pennsalt Chemicals

Subject: Penn-Olin—Manufacturing Cost Projection—5 Years
Date: July 26, 1960
To: Mr. J. McWhirter
From: A. S. Woodward
Copies To: N22—2X

As requested, we have endeavored to estimate the probable increased manufacturing cost of the Penn-Olin chlorate plant over the next five years. Using information obtained from Purchasing and other sources and applying our own judgment factors, we estimate that the manufacturing cost in the fifth year will be approximately $161,000 per year greater than projected in our basic estimate forwarded to you July 6, 1960. The attached tabulation shows the increased cost per year expressed as percentage of the base estimate for all items on which increased costs are anticipated.

You will note, in summary, that we have used from 5 to 10% increase for salt and other chemicals consumed including graphite. A 10% increase for fuel has been assumed (equivalent to 5% on steam costs) and a 25% increase in labor costs has been assumed based on the past five years experience at Calvert. All indirect costs which are based on labor have been increased by the same 25%. Repair materials have also been increased by 25%. After analysis of the fuel costs in the proposed TVA contract and discussion with TVA of present and past TVA fuel costs, we are of the opinion that increased cost of power need not be projected for the first five years.

It is interesting to note that this estimated increase in manufacturing cost is approximately 6% of the basic manufacturing cost estimate. Further, assuming that the costs increase at a linear rate over a five year period, the average increase is $80,500 per year which would result in a reduction of the net operating revenue expressed as a percentage of total investment drops from 15.3% (Mr. Niederriter's

financial analysis) to 14.2%. One further observation, at the cost projected for the fifth year, an increase in production of 8% would offset the increased cost.

A. S. Woodard

asw:jh
attach.

[fol. 1301] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 242

Olin Mathieson Chemical Corporation

Date: July 28, 1960.

To: Permanent Members of CAR Committee at 460 Park
From: R. L. Dietrich at 460 Park
Subject: Penn-Olin Investment

Attached is a draft of the Committee Discussion to accompany the CAR for Penn-Olin when it goes to Mr. Osborne. In view of the possibly controversial nature of the problem, I believe you would like to review it before submission. Harlow Reed is out of town and has not seen this but will be asked to approve the final draft. May I have your approval or comments.

R. L. Dietrich.

RLF/ak
Att.

Received August 1, 1960; W. F. O'Connell.

[fol. 1302] CAR Committee Discussion

Penn-Olin Sodium Chlorate Plant
Car #172-001-377B

July 28, 1960.

The Penn-Olin Sodium Chlorate Proposal was discussed at the CAR Committee Meeting of July 27, 1960. The Committee unanimously recommended that the project should be rejected. This recommendation was based on the following:

1) The Penn-Olin evaluation shows only 8.1% return on gross investment without financing expense or corporate overhead and at full capacity operation. The evaluation appears to be an optimistic appraisal and actual return would probably be even lower. The Chemicals Division re-evaluation showing 9.3% seems to be based on undue optimism, for a return figure. Original approval in principle was given on the condition that the return should be at least as good as then estimated (9.7%).
2) Even if the optimistic predictions were achieved, the project would reduce the present overall return on investment of the Chemicals Division. If an improvement in earnings is to be achieved, new projects must be above the current average.
3) Recent five-year contracts for Sodium Chlorate offered by Hooker guarantee that there will be no price increase but allow a price decrease. Our entry into the market almost certainly would reduce prices resulting in an even lower return on investment or even a loss.
4) Sodium Chlorate is in surplus and substantial quantities have been offered to us. There appears to be no incentive for other producers to go into the business at this time.
5) There has been little doubt that the product could be sold. We would gain very little business in other products by having sodium chlorate available. We would probably even lose some caustic business by the use of trade relations to sell chlorate.
6) The profit margin on chlorate is so low that it can only be produced as an adjunct of a Chlorine-Caustic plant in the TVA area. If at a future date, prospects look better, we can build a chlorate plant tied to the proposed chlorine-caustic plant in the Chattanooga area. This would have freight and operating advantages over the Calvert City location.
[fol. 1303] 7) Pennsalt does not appear to be enthusiastic and probably would be willing to drop the project. The letter of intent provides for sharing of expenses to date as the only obligation.

8) A letter has been received from the Department of Justice questioning the joint venture. This letter adds to the undesirability of the project but it does provide a convenient excuse not to go thru with it.

After a long and detailed discussion and study, the Committee recommends that the project be dropped. The return of investment is very low and there is no other compelling reason to enter the business. If the situation improves later, the project could be revived either as a joint venture with Pennsalt or independently by OMCC.

R. L. Dietrich, Secretary—CAR Committee.

RLD/ak

[fol. 1304] In United States District Court

Plaintiff's Exhibit 243

CAR Committee Discussion
Penn-Olin Sodium Chlorate Plant
CAR #172-001-377A and B

July 29, 1960.

The Penn-Olin Sodium Chlorate Proposal was discussed at the CAR Committee Meeting of July 27, 1960. The Committee unanimously recommended that the project should be rejected. This recommendation was based on the following:

1) Alternate proposals have been submitted. CAR 377A was an evaluation by Penn-Olin and CAR 377B a more optimistic treatment submitted separately by the Chemicals Division.

2) The Penn-Olin evaluation shows an estimated return of 8.1% on a gross investment of $3,714,500, OMCC interest (50%) beginning in 1963 at 100% capacity operation and before corporate overhead and financing charges.

The Chemicals Division evaluation shows 9.3% return on a gross investment of $3,589,500 OMCC in-

terest (50%) on the same basis. The CAR Committee considers that the Chemicals Division evaluation is not realistic and the Committee does not agree with the Chemicals Division that the Penn-Olin evaluation is extremely conservative.

3) The Sodium Chlorate Evaluation Committee on March 9, 1960 endorsed the Penn-Olin project on the understanding that the final report of the technical group would confirm the estimated net profit of 9.7% indicated as of that date. Such confirmation not having been established, the CAR Committee now recommends disapproval of the project on the basis that if an improvement in earnings is to be achieved, new projects must show indicated returns substantially above the present average. The Industrial Chemicals Division average return in 1959 was 8.4% on gross investment before corporate overhead and financing charges.

4) Recent five year contracts for sodium chlorate offered by Hooker guarantee no price increase, but contain a decline clause which allows a price decrease. Our entry into the market might stimulate buyers to attempt to reduce prices, and if accomplished, would result in an even lower return.

[fol. 1305] 5) Solvay, who have been selling as sales agent on a commission basis, for American Potash, have cancelled their contract. American Potash are looking for another corporation to sell the chlorate for them. It is understood that they have approached us and offered us 14,000 tons per year, if we are interested.

6) The Committee was advised that it looked quite possible to sell the entire output of the plant within two years from the day they started. It is the opinion of the Committee that sale of the chlorate would not attract much business in other products. It is also likely that we might even lose some present existing business which we have with Hooker by our entry into the business. Some of our apparent increases in chlorate sales might be offset by reducing the sale of other products in certain accounts

where trade relations balances are rigidly adhered to.

After a long and detailed discussion and study, the Committee recommends that the project be dropped. The return on investment is very low and there is no other compelling reason to enter the business. If this project is disapproved, because of our exposure to Pennsalt know-how, we should not proceed independently for a considerable period of time. The Committee does not see any reason to expect that we would want to do so.

R. L. Dietrich, Secretary, CAR Committee.

[fol. 1306] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 244

Penn-Olin Chemical Company

July 29, 1960.

Approved by Board 8/3/60

$1,000,000 is requested for investment in the Penn-Olin Chemical Company. This investment will represent a 50% stock ownership (with an equal amount being contributed by the Olin Mathieson Chemical Corporation), and the balance of the required money (i.e. approximately $6 million) will be raised by outside borrowed capital. These funds will be used by Penn-Olin for the construction of a 25,000 ton sodium chlorate plant adjacent to our Calvert City operation. This is in accordance with the program originally discussed at the February 3, 1960 Board Meeting.

Investment, Earnings & Return on Investment

	10 Year Average	
	Penn-Olin	Pennsalt
Total Investment	$7,429,000	$1,000,000
Project Operating Earnings (i.e. before interest, excess depreciation and taxes)	1,135,000	—
Dividend to Pennsalt (net profit available after debt service)	—	130,000
Return on Investment (before tax basis)	15%	25%
Earnings per share after taxes	—	3.1¢

In addition to the return on Pennsalt's investment noted above (which will come from dividends) it is conservatively estimated that Pennsalt will benefit to the extent of over $100,000 per year in reduced overhead and other costs in its Calvert City plant operations, thus making the actual total return on Pennsalt's investment higher than 25%.

Pennsalt has produced sodium and potassium chlorate for many years at Portland, Oregon and the new Penn-Olin plant will utilize Pennsalt technology. Olin Mathieson, in turn, has a strong market position in chlorates since they have developed an efficient patented process for the generation of chlorine dioxide from sodium chlorate, which process is in use in pulp and paper mills throughout the country, and especially the Southeast.

[fol. 1307] In addition to the increasing demand from the pulp and paper industry, sodium chlorate is also the major raw material used in the production of ammonium perchlorate (a solid rocket fuel oxidizer) and in the manufacture of defoliants and weed killers.

* * * * * *

Assuming approval of this project by both the Pennsalt and Olin Mathieson Boards, authorization is requested to proceed with the sale by Pennsalt of the necessary land to Penn-Olin (approximately 13.5 acres at current appraised value). Negotiations will also be initiated in connection with Penn-Olin borrowing the $6 million mentioned above.

[fol. 1308] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 245

Penn-Olin Sodium Chlorate Plant

A special meeting was called by Mr. Osborne to discuss the Penn-Olin proposal CAR 172-001-377B on August 1, 1960.

Present were:

Chemicals Division	Corporate
E. Block	S. de J. Osborne
J. O. Logan	R. Hopkinson
J. G. Johns	W. F. Otterstrom
J. L. Wood	H. J. Reed
J. Statz	W. F. O'Connell
	D. W. Drummond
	G. Grand
	W. E. Hanford
	J. R. Sanderford
	R. L. Dietrich

Mr. Osborne called the meeting to resolve the differences of opinion concerning the proposed Joint Venture with Pennsalt in the construction of a Sodium Chlorate Plant as an adjunct to the Pennsalt Plant at Calvert, Kentucky. The Division recommends the venture, the CAR Committee recommends that it be dropped. Mr. Osborne wanted to hear the entire story before reaching a decision.

Mr. Logan presented the case for the Chemicals Division.

Market.

Right after World War II, OMCC gave to the paper industry royalty-free licensing of the Mathieson Chlorine Dioxide Generator for pulp bleaching. Solvay also gave away their generator for the same purpose. There are now 23 Mathieson Generators and 12 Solvay Generators installed which at capacity would use 97,000 Tons/Year of sodium chlorate. It is estimated that actual use will reach 65,000 Tons in 1962. These generators constitute the major

market for chlorate though roughly 15,000 Tons are used for Ammonium Perchlorate for Defense purposes and a small amount as a weed killer.

John Logan believes that the sale of chlorate will give help in selling other chemicals to the paper industry. Paper industry now accounts for 9.2% of Industrial Chemical Sales.

[fol. 1309] Competition

Hooker Chemical has capacity for 36,000 Tons; ⅓ at Niagara, ⅔ at Columbus, Miss.

American Potash has 57,000 Ton capacity; 34,000 at Henderson, Nevada and 23,000 at Aberdeen, Miss.

Pennsalt has 23,000 Tons at Portland, Oregon.

Columbia-Southern produces in Canada but not in the United States at present. Mr. Block believes that Columbia-Southern will go into the business in the United States if we don't.

Solvay has been selling American Potash material but has given up the franchise. It has been offered to OMCC.

Hooker has offered the major users five year fixed price contracts, probably blocking any price increase for five years. These contracts allow no escalation upward but do permit downward revision.

A little chlorate is imported. More is available and will maintain a ceiling on prices.

Technical

Surveys of American and European industry have indicated that Pennsalt has the best process. There is no question concerning technical know-how and competence.

The plant must be an adjunct of another plant and must be in the TVA area to have competitive costs.

Capital Cost and Production Cost

Joe Wood is of the opinion that Pennsalt is ultra-conservative and that cost figures are too high, both in capital and operating cost.

[fol. 1310] CAR Committee

Mr. Reed reported for the CAR Committee. The Committee believes that the return on investment is too low. About 30% of Chemicals Division Projects are not profit generating; at present, the Division returns 8.4% on gross investment and in order to maintain it, the profit generating investments must reach at least 12%. This project will reduce the return of the Division rather than improve it. Since they can see no compelling reason to enter the business, the Committee recommends rejection of such a large investment for so small a return. The return will lie someplace between 7.1% and 9.3% on a 7.2 to 8.2 million dollar investment.

Mr. Osborne noted that the 9.3% claimed was before inter-corporation dividend tax and before corporate overhead and financing costs. The dividend tax alone would reduce the return to 8.48%.

Pennsalt Relationship

Mr. Osborne explored the effect of our relationship with Pennsalt if we do not proceed. It was concluded that the only serious obligations were (1) that Pennsalt be notified immediately (2) that we pay 50% of costs to date ($50,000 to $100,000) and (3) a moral obligation not to enter the business on our own for a substantial period of time.

Summary

Mr. Osborne summarized the facts as follows:

(1) An investment of $7,200,000 to $8,200,000
(2) A return of 7.1% to 9.3% before dividend tax, financing costs and corporate overhead
(3) Chemicals Division wants to extend their line of paper industry chemicals
(4) Price is frozen for five years with a ceiling after that imposed by imports and competing chemicals
(5) The Penn-Olin joint venture may open the door to a Department of Justice Investigation.

[fol. 1311] Decision

After recess and further investigation, Mr. Osborne announced his decision not to proceed for the following reasons:

(1) Department of Justice complaint is serious. While this is not governing, he would prefer not to battle on a project of such a low return.

(2) The return on investment is too low. The product is not important enough to our structure to justify proceeding with such a low return investment.

(3) The price situation is deteriorating. Fixed prices and inflating costs will squeeze return even lower for five years; after which time will be required to correct the situation. The return will stay low for 7 or 8 years.

(4) While our cash position is good, we can't have everything. The corporate profit on investment must increase and this project won't help. The maximum estimate of 9.3% would only be 8.5% after dividend tax.

(5) The project provides little opportunity for future expansion.

R. L. Dietrich, Secretary, CAR Committee

[fol. 1312] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 247

Olin Mathieson Chemical Corporation

August 2, 1960.

To: Mr. E. Block at Baltimore
From: J. L. Wood at Baltimore
Subject: Chlorate Plant Study
Using Vickers-Krebs Bid

Copy to
Mr. J. O. Logan
Mr. J. Statz

Recd: Aug. 22—

1. Cap. 26,500 tons.
2. Spare cap. outside of cell room
3. New est. of Cap. $6,454,000
   a. $100,000 no packaging
   b. $200,000 fees etc.

The technical team at Portland came up with these conclusions:

1. V-K cell installation would cost approximately $5,500,000.
2. Pennsalt cell installation using 8,000 ampere cells would cost $5,800,000.
3. There was no significant difference in operating consumptions or costs in either installation.
4. We should go with a thoroughly proven cell which is fully familiar to the actual operators.
5. A further OMCC conclusion was that Pennsalt pride in their own cell was worth our share of $300,000 in a joint venture.
6. Substitution of titanium heat exchangers for Karbate removes one of the big objection to the Vickers-Krebs cell system; Vickers-Krebs estimated approximately $55,000 additional cost on two units.

Following your instructions, J. Statz and I prepared the following attached evaluation comparison:

177A Original Penn-Olin economic evaluation.

177A Revised—Original Penn-Olin basis using Vickers-Krebs plant costs and corresponding depreciation change.

177B Revised—Uses Vickers-Krebs plant costs with revisions in operating costs and 100% bulk sales.

1. Return.
2. Ceiling price by Hooker—$161,000 inc. in op. cost. in 5 years.
3. Anti Trust.
4. Gen. Ec. Climate increase of 8% sales would offset above forms revised for defense dept. Barnes, Deckert, Price, Meyers, Rowe.

[fol. 1313] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 250

August 19, 1960.

Mr. Walter F. O'Connell, Vice President
Olin Mathieson Chemical Corporation
460 Park Avenue
New York 22, New York

Dear Walter:

Re: Penn-Olin Chemical Company

You will find enclosed two re-stated copies of the Summary of Sales and Earnings and Estimated Cash Generation. These reflect the revised capital cost estimates, earnings estimates, and increased equity investment and reduced loan requirements. They also reflect Plant Management and Selling and Administrative fees.

This morning I discussed the three methods of approach which we reviewed yesterday, and it is our feeling that we would much prefer the approach contained in these state-

ments for two principal reasons, namely: a significant equity investment and a desire not to guarantee the loan in any manner.

You will note that we believe the total bank loan must amount to $4½ million rather than the $4 million discussed yesterday. It is my hope that this increase will still permit the loan to stand on its own feet and not require any form of guarantee.

Should you have any questions, kindly call me.

Sincerely yours, W. Cooper Willits, Treasurer.

wcw/r
encls.

[fol. 1314] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 251

Pennsalt Chemicals

Date: August 22, 1960.

Subject: Penn-Olin—Revised Estimates

To: Mr. J. McWhirter
From: A. S. Woodard
Copies to L9—N22—W1

As requested through Mr. Wood, we have met with Messrs. Harlowe Reed, Richardson, and Wood on the afternoon of Friday, August 19th, to discuss the revised Penn-Olin estimates. Mr. Reed is Chairman of the Capital Appropriations Committee for Olin Mathieson.

Mr. Reed stated that the Penn-Olin project was rejected by Olin Mathieson because it had an inadequate return on investment. Olin Mathieson has a minimum standard of 10% net on gross investment. In view of the revised estimates, he wished to establish through discussion with Messrs. Wood and the writer the adequacy of the revised capital estimates as well as the operating costs used in the economic projection.

It was pointed out to Mr. Reed that we had been advised

by Olin Mathieson that the preliminary estimates and evaluation had been considered satisfactory by Olin Mathieson in view of the long term benefits of the project to both parties, and Pennsalt had reconciled its concern with the low return and agreed to proceed. With this background, the estimate presented to the Penn-Olin Board on July 12th had been prepared to establish the validity of the preliminary estimate rather than to determine the most favorable capital costs and economics that might pertain. It was pointed out that had our objective been the latter, considerably more time would have been required for engineering prior to estimating and we could not have agreed to the July 12th date for submission of estimates.

We reviewed our revision of the estimate of the job as presented in our letter to you dated August 16, 1960. It was noted that this did not constitute a re-estimate of the job since we did not feel that the time and expense was warranted. Further, the status of the engineering and acquisition does not presently warrant such a re-estimate. We discussed the elimination of the packaging facilities [fol. 1315] as well as warehousing of packaged goods. Mr. Wood repeated to Mr. Reed that Sales (Olin Mathieson) was in accord with the recommended elimination of these facilities. This amounts to $100,000 reduction in capital required. The additional $200,000 reduction results from our decision to contract construction locally with attendant savings in construction fees, field office costs, and construction tools. Mr. Wood had suggested substitution of evaporative crystallizer for the refrigerated crystallizer used by Pennsalt at Portland, but it was agreed to drop this from the present estimates pending final review by Pennsalt. (Decision on this processing item is expected to be made by August 26th). Mr. Reed was concerned with the low "contingency" allowance, but appeared to feel it was offset by the favorable proposals for rectifiers as well as acceptable bids on the electrolytic cells.

Finally, after being reassured that we were not proposing to "cheapen" the plant to make the savings in capital cost, Mr. Reed asked if we were willing to say that the revised estimate was the last word on cost and that we were prepared to let the job stand or fall on these numbers. It was pointed out to Mr. Reed that we had no authority to make

such a statement and, secondly, as mentioned above, the estimating to date had been only for the purpose of confirming the realism of the preliminary analysis and that completion of the engineering would be required before a more definitive estimate would be possible.

After agreement that the numbers used by both companies would be those included in our written memorandum of August 16th and Mr. Niederriter's tabulation dated August 16th, we inspected the preliminary model of the process which is in Central Engineering's office. Mr. Reed seemed to be satisfied with the facts as presented to him. (He requested and received a copy of United Engineers and Constructors' report, "Sodium Chlorate Plant—Process Design and Cost Estimate").

A. S. Woodard.

asw:jh

[fol. 1316] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 252

[Extract]

Financial and Operating Policy Committee
Minutes of Meeting
August 24, 1960

Present: Mr. J. M. Olin, Chairman, Mr. J. W. Hanes, Mr. T. S. Nichols, Mr. S. de J. Osborne.

* * * * * * *

2. Capital Appropriation Requests.

* * * * * * * *

The Committee approved the investment of $1,500,000 in the equity of Penn Olin Chemical Company, a joint enterprise with Pennsalt Chemicals Corporation, for the construction of a Sodium Chlorate Plant, costing $6,454,000, at Calvert City, Kentucky.

* * * * * * * *

[p. 5]

Respectfully submitted, S. de J. Osborne.

SdeJO:JF

[fol. 1317]

IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 253

Olin Mathieson Chemical Corporation

CAPITAL APPROPRIATION REQUEST For Investment in Joint Venture

OM-6310 REV. 8-58 This replaces all prior CAR's of this number.

NOTE: See Standard Procedure No. 7 for detailed instructions and required signatures.

DATE Aug. 29, 1960

TYPE	IF FORECASTED	APPROPRIATION NO.
☐ FORECASTED ☒ NON-FORECASTED	FORECAST NO. ____ FORECAST AMOUNT ____	172-001-377C
TITLE: PENN-OLIN CHEMICAL COMPANY - INVESTMENT		AMOUNT ~~$3,714,500~~ $3,227,000
OPERATING DIVISION OR ADMINISTRATIVE DEPARTMENT: CHEMICALS DIVISION - INDUSTRIAL		ORIGINATED BY: J. L. WOOD
PLANT LOCATION: Calvert City, Kentucky	DEPARTMENT NAME & NUMBER	BUILDING NAME & NUMBER / FLOOR

DETAILS OF PROPOSAL (Including expected results and accomplishments) (Attach extra sheets on plain paper if necessary)

To request the necessary funds to cover Olin Mathieson's 50% interest in new facilities to be constructed by Penn-Olin under their appropriation request covering a plant to produce 26,500 tons per year of sodium chlorate. The supporting data on which funds will be requested by Penn-Olin is attached. Arrangement for providing capital are to be worked out by Pennsalt Chemicals Corporation and Olin Mathieson Chemical Corporation.

Capital Requirements:

Penn-Olin's Fixed Capital at 50%	$3,227,000**
Working Capital at 50%	337,500
TOTAL	$3,564,500
***From start of construction	8.6 years
In full production	6.6 years

PENN-OLIN D-1/8

These facilities are to be constructed at Calvert City, Kentucky adjacent to the present Pennsalt operations on land purchased by Penn-Olin from Pennsalt. The plant is located here to take advantage of low cost TVA power and existing facilities from which Pennsalt will provide the necessary services for plant operation.

AMOUNT TO BE CAPITALIZED	$3,227,000	SIGNATURES	DATE
AMOUNT TO BE EXPENSED	$	Engineering Estimate J. L. Wood	Aug. 29/60
TOTAL			

CHEMICALS DIVISION - INDUSTRIAL		J. L. WOOD	
PLANT LOCATION	DEPARTMENT NAME & NUMBER	BUILDING NAME & NUMBER	FLOOR
Calvert City, Kentucky			

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AMOUNT TO BE CAPITALIZED	$ 3,227,000		SIGNATURES	DATE
AMOUNT TO BE EXPENSED	$		Engineering Estimate J. L. Wood	Aug. 29/60
TOTAL	$ 3,227,000			8/25/60
LOSS ON RETIREMENTS (Attach form 6514)	$			9/6/60
SCHEDULE OF PROPOSED EXPENDITURES — THIS YEAR	$ 850,000	ESTIMATED COMPLETION DATE (Month & Year) July, 1961	Operating Division Head	9/8/60
NEXT YEAR	$ 2,377,000		Vice President - Marketing	
FOLLOWING YEARS	$		Vice President for Manufacturing Services	
PERCENT RETURN ON GROSS INVESTMENT (Per line 22 of Economic Evaluation attached)	10.1%		President	
CASH RECOVERY PERIOD (Per line 25 of Economic Evaluation attached)	*** YEARS		Board of Directors Executive or Financial & Operating Policy Committee	
SIGNATURES ▶ DIVISION FINANCIAL OFFICER		DATE 9/7/60	CORPORATE V.P. & COMPTROLLER	DATE

Logged 9/13/60 MBP
Ten Year $3,714,500

COPY FOR: DIVISION FINANCIAL OFFICER

T. D. BURKE 7

[fol. 1318] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 254

Penn-Olin Chemical Company
Capital Appropriation Request
Sodium Chlorate Plant
Calvert City, Kentucky

Revised: August 29, 1960

[fol. 1319] Introduction and Summary

The production of sodium chlorate is an essential and integral part of Olin Mathieson's chemical business.

a. The product is made by an electrolytic process using salt as the main raw material. This is intimately related to the extensive caustic-chlorine operations of Olin Mathieson. The same general technical knowledge is required and is transferable.
b. The principal and growing market for sodium chlorate is for bleaching of wood pulp via chlorine dioxide generation. Olin Mathieson has operated a commercial chlorine dioxide generator longer than anyone else in the world. This experience has resulted in the installation of over twenty chlorine dioxide generators in the major paper mills of the country. Olin Mathieson is well established as a supplier of chemicals to this market and must get a return on the effort put into chlorine dioxide generation installations.
c. The proposed operation also is the first step in the future production of perchlorates should Olin Mathieson decide to go into the perchlorate business via either its Chemical Division, or its Energy Division.

A joint venture with Pennsalt Chemicals Corporation to produce 26,500 tons per years is proposed on the basis of data as follows herein.

[fol. 1320] Sodium Chlorate

Market Analysis

1. Market History of Product

The total non-captive market for sodium chlorate in the U. S. amounted to approximately 70,000 tons in 1959. Published figures for previous years are unavailable but the magnitude of growth is directly related to the increase in rate of production, from 22,000 tons in 1950 to 87,000 tons in 1959.

Published price for sodium chlorate has been stable since 1956 at nine cents per pound, carload of drums. No dis-

counts, concessions or premiums are allowed. Transportation charges are for the account of the buyer.

The foregoing price is factual, no discounts are allowed to volume purchasers.

There have been only three domestic producers of sodium chlorate during the last five years. Two of these three producers have increased their productive capacity during this five-year period, largely through provision of plants to serve the pulp and paper industry.

2. New Market Objective

Demand for sodium chlorate is expected to continue to increase, particularly in the pulp and paper industry. The chlorine dioxide production process used by the majority of the pulp mills in the southeast was developed by Olin Mathieson at its Niagara Falls laboratory. The engineering and operating know-how so developed has been made available to the mills at no cost. Our technical service men have provided valuable assistance to the paper mills in solving start-up and operational problems. They are well-known and respected in the industry. OMCC should take advantage of its extensive experience with the chlorine dioxide process and with the pulp and paper industry to enter the sodium chlorate market.

3. Five Year Sales Forecast

It is visualized that the total non-captive market sales during the next five years, and OMCC's percentage of the total available market during this period will be as follows:

[fol. 1321]

	Total Non-Captive Market	OMCC Percentage of Market
1960	77,000	—
1961	84,000	—
1962	91,000	22%
1963	98,000	27%
1964	105,000	25%

In view of the stability of the market over the past few years we anticipate no major price changes during the next five years.

Because of the relatively favorable balance between production and demand, together with projections of in-

creased demand, we visualize that the market will be stable and that competitors will enter the market only to supply increasing requirements.

For a competitor to enter this business studies show that the economic size for a new plant would be in the 20 to 25 thousand annual ton size. Capital outlay for a plant of this size range will require $7,500,000 when attached to an existing plant with basic facilities. At a new site or "green grass" location, a minimum of $1,000,000 additional would be required. It would require a competitor a minimum of 18 to 24 months to build up a sales force for marketing 25,000 tons per year of chlorate assuming an existing basic organization for heavy chemicals sales. A Penn-Olin technical team survey showed the only reliable technical know-how for sale to be available in Europe. Electrolytic cell know-how can be purchased from several reliable sources. Information on crystal recovery is less extensive and suitability to U. S. conditions would require a year of intensive pilot work to develop. The basic raw material is solid salt or brine and involves no supply problem in conceivable industrial areas. However, power requirements are so large, over 6,300 KWH per ton of chlorate, that any plant must locate in a low cost power area such as TVA. The major problem facing any competitor would be entry into the portion of the chlorate market where the present growth is taking place. The growth is in the chlorine dioxide bleaching field which is dominated by the Olin Mathieson patent position and to a minor extent by the Solvay position.

Sodium chlorate to be marketed by OMCC will have no element of exclusiveness with respect to quality and geographic area of availability. As previously discussed, OMCC has a distinct marketing advantage by reason of its long association with the pulp and paper industry in providing know-how and technical assistance in connection with chlorine dioxide generators.

It is not anticipated that the sale of sodium chlorate will have any appreciable effect on the sale of other OMCC products.

[fol. 1322] 4. OMCC Marketing Operation

Sales of sodium chlorate will be made directly to consumers in bulk carload lots to the pulp and paper industry, which is the primary market for sodium chlorate.

Sales are non-seasonable and no excessive inventory accumulations or warehousing operations will be required.

Sodium chlorate will be marketed through our existing field sales organization with the assistance of our present technical service personnel. Some increases in personnel, both for sales and technical service may be necessary.

[fol. 1323] Scope

The plant as proposed has a capacity to make 26,500 tons per year of sodium chlorate by the electrochemical oxidation of sodium chloride. It is to be located in the general works area of Pennsalt Chemicals Corporation at Calvert City, Kentucky.

The process design is based on information provided by Pennsalt. Although some engineering modifications have been made, the process is very similar to the one Pennsalt has in operation at Portland, Oregon.

The plant contains a brine purification section, 636 electrolytic cells each drawing 8,500 amperes, a double effect vacuum evaporator, a crystallization section with two stages of cooling and a rotary dryer. All shipments will be in bulk and will be made in 50 to 70 ton hopper cars. Storage for 1,500 tons of sodium chlorate is provided.

Electric power is obtained from a TVA line at 13,200 volts approximately 3,000 feet away. Steam, chlorine and caustic are received from the main Pennsalt works. The plant has its own 15,000 gallons per minute cooling tower installation.

The capital cost of this sodium chlorate plant, including the costs of tying in to the TVA line and the Pennsalt steam mains, is estimated to be $6,454,000. This includes a contingency of $310,000.

The annual materials and utilities requirements include the following:

Materials	Units Per Year
Sodium Chloride	31,800,000 lbs.
Chlorine	1,060,000 lbs.
Sodium Hydroxide	770,000 lbs.
Barium Chloride	475,000 lbs.
Sodium Carbonate	290,000 lbs.
Graphite Anodes	530,000 lbs.
Utilities	
Steam (150 psig)	175,000,000 lbs.
River Water (90°F)	850,000,000 gals.
Electricity (13,200 volts)	185,000,000 kwh

[fol. 1324] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 255

Mon 8/29/60 p6

Plaintiff's Osborne 6 for Identification

Milestones

October 4, 1961

J. Birkhahn, CSR

Olin Mathieson to Build $13 Million Chemical Plant in Tennessee

By a Wall Street Journal Staff Reporter

New York—Olin Mathieson Chemical Corp. announced over the weekend it will build a $13 million plant at Charleston, Tenn., to produce chlorine and caustic soda.

To be located on a 600 acre site on the Hiwassee River, the new plant will have a capacity of 180 tons a day and is expected to be in operation by the end of 1961.

The company said the Charleston unit will increase Olin Mathieson's ability to supply Southern markets. It also will

supply chlorine and caustic soda to the chemical company's own operations. Olin Mathieson already has chlorine and caustic soda facilities at Niagara Falls, N.Y., McIntosh, Ala., and Saltville, Va.

Stanley de J. Osborne, president of the company, said Olin Mathieson anticipates that other industries supplying Southern producers and using Mathieson raw materials will move into the Charleston area.

He noted that the expansion is in addition to the $30 million chemical expansion program announced a year ago. The Charleston unit will be financed from company funds. It will get its power from the TVA.

[fol. 1325] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 256

Pennsalt Chemicals Corporation
P. O. Box 1297, Tacoma 1, Washington

August 30, 1960

Olin Mathieson Chemical Corporation
Mathieson Building
Baltimore 3, Maryland
Attention: Mr. Marriott

Re: Order BA 55841

Gentlemen:

Later today our Portland office will forward our invoice covering the above referenced order for a total of 500—100 pound drums of Sodium Chlorate for shipment to your plant at Phoenix, Arizona. We have noted on your purchase order that you have indicated a 5% commission is applicable as this material is for resale. Last year Mr. Drake Watson, our General Manager, clarified this situation with your company, and we are under the impression that this material is not resold as Sodium Chlorate but is used in the manufacture of defoliants at your Phoenix plant. As a result, we do not consider this item as a resale item and

the 5% commission seemingly does not apply. Consequently, our invoice has been prepared accordingly.

Change order issued to cancel 5% Commission.

9/1/60

OK per

9/6

Very truly yours, Pennsalt Chemicals Corporation, A. F. Pilling, Administrative Assistant, Agricultural Chemicals Division.

AFP:dh

[fol. 1326] In United States District Court

Plaintiff's Exhibit 257

September 1, 1960.

Penn-Olin Chemical Company

$1,500,000 is requested for investment in the Penn-Olin Chemical Company. This investment will represent a 50% stock ownership (with an equal amount being contributed by the Olin Mathieson Chemical Corporation), and the balance of the required money (i.e., approximately $4.5 million) will be raised by outside borrowed capital. These funds will be used by Penn-Olin for the construction of a 26,500-ton sodium chlorate plant adjacent to our Calvert City operation.

Investment, Earnings & Return on Investment

	10-Year Average	
	Penn-Olin	Pennsalt
Total Investment	$ 7,129,000	$ 1,500,000
Project Operating Earnings (i.e., before interest, excess depreciation and taxes)	1,352,000	—
Income to Pennsalt (Management Fee annually and Dividends after borrowed capital paid back), before tax basis	—	460,000
Return on Investment (before tax basis)	19%	31%
Earnings per share after taxes	—	5.7

In addition to the return on Pennsalt's investment noted above (which will come from management fee and dividends), it is conservatively estimated that Pennsalt will benefit to the extent of over $100,000 per year in reduced

overhead and other costs in its Calvert City plant operations, thus making the actual total return on Pennsalt's investment higher than 31%.

Pennsalt has produced sodium and potassium chlorate for many years at Portland, Oregon, and the new Penn-Olin plant will utilize Pennsalt technology. Olin Mathieson, in turn, has a strong market position in chlorates since they have developed an efficient patented process for the generation of chlorine dioxide from sodium chlorate, which process is in use in pulp and paper mills throughout the country, and especially the Southeast.

[fol. 1327] In addition to the increasing demand from the pulp and paper industry, sodium chlorate is also the major raw material used in the production of ammonium perchlorate (a solid rocket fuel oxidizer) and in the manufacture of defoliants and weed killers.

* * * * * * *

Assuming approval of this project by both the Pennsalt and Olin Mathieson Boards, authorization is requested to proceed with the sale by Pennsalt of the necessary land to Penn-Olin (approximately 13.5 acres at current appraised value). Negotiations will also be initiated in connection with Penn-Olin borrowing the $4.5 million mentioned above.

[fol. 1328] In United States District Court

Plaintiff's Exhibit 259

Pennsalt Chemicals

Subject: Penn-Olin Chemical Company
Date: September 6, 1960
To: Mr. William P. Drake
From: W. Cooper Willits

In addition to the revised memorandum which has been sent to the directors, you will find attached a recast Summary of (estimated) Sales and Earnings and Estimated Cash Generation—1961-1971. Also attached is a memo from Al Clem concerning the sales outlook.

As you know, since the Board approved investment of

$1,000,000 in the project at the August meeting, revision of plans has been made in several important areas; namely:

1. Total investment has been reduced to $7,129,000 from $7,429,000. Principal factors enabling this reduction are receipt of substantially lower bids than originally estimated for electrical equipment; restriction of project to bulk sales, thus eliminating capital costs for packaging equipment; and more finalized engineering, which pinpoints other estimated costs to a higher degree.
2. Increased capacity of plant to 26,500 tons from 25,000 tons per annum and, accordingly, increased annual sales to $4,190,000 from $4,007,420.
3. Increased project operating earnings to $1,352,000 from $1,135,000, which increases the return on the total project to 19% from 15%.
4. Increased investment to $1,500,000 from $1,000,000, which will enable the project to pay out within seven years and thus permit commercial banks to handle all the financing, which in turn eliminates the need for longer term insurance loans. It is also believed that the higher equity ($3,000,000) and lower need for borrowed funds ($4,500,000) will not necessitate any type of guarantee, either director or indirect, on the part of the parents. I wouldn't particularly dwell on this point, in that the Board recognized at the last meeting that, while no formal guarantee might exist, there certainly would exist a moral obligation insofar as protecting the credit position of Pennsalt.

[fol. 1329] 5. In spite of the increased investment, the return on this investment has been increased to 31% from 25%.

6. In place of dividend payments, justifiable plant management fee and selling and administrative fee for Pennsalt and Olin Mathieson respectively, starting in the amount of $180,000 in 1962 and increasing to $300,000 in 1963 and succeeding years, is provided. These fees will yield a return on $1,500,000 equity investment for each parent of 20% before taxes for 1963 and subsequent years; the $180,000 for 1962 provides a return of 12%.

This method eliminates the 15% tax on dividends during the period of debt payment (through 1967). Subsequent substantial earnings in excess of these fees will probably have to be paid out in the form of dividends. However, if Olin's sales projections materialize, these earnings would be retained in the company to expand the plant.

A complete appropriation request is being prepared for approval at the next Penn-Olin Chemical Company Board meeting, which will be held within a few weeks. It is impossible to have this revised request available for tomorrow's meeting, in that all of the figures are being recast to reflect the many changes mentioned previously.

W.C.W.

wcw/r
encls.

[fol. 1330] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 263

September 14, 1960.

Mr. C. C. Hightower, Baltimore
B. H. Nicolaisen, Niagara Falls
Development Department Budget—1961

Three copies of the proposed 1961 Capital and Expense Budget are enclosed. Project detail sheets are included to allow a thorough analysis of the budget.

The budget has been carefully and realistically developed and it is hoped that it will be generally self-explanatory. Some change in the ratio of Capital and Expense spending may be noted from the original rough estimate. This is due to the fact that most pilot plants will not be capitalized in total unless they are to be directly converted to production usage. Some items in those pilot plants will require capitalization, however, because of their expense and durability. The final budget has taken those factors into detailed consideration.

Under separate cover, we are forwarding brochures covering the proposed facility shown in the Capital Budget.

L. P. Scholl.

LPS:HM
Encl.

[fol. 1331] Development Research Budget

Project Costs

Project Costs	Total Costs with Overhead Applied 1961 Budget	1960 Estimate	
1. New Product Development			
2. Product Cost Reduction			
New Chlorite from Amalgam	132,696	125,438	
4201 Sodium Chlorate	239,051	230,944	30,500
3. Equipment Development			
4. Factory Assistance			
	875,620	1,086,105	333,475

[fol. 1332] Chemicals Division

Development Department
Capital Expenditures Forecast—1961

Class B—Expansion of Existing Equipment

Description and Purpose		Cost
1. Chlorate Pilot Plant		12,000
Chlorate Filter	3,500	
Tankage and Pumps	5,500	
Instrumentation	3,000	
3. Chlorite from Amalgam Pilot Plant		7,200
Instrumentation, Pumps and Tankage		
Total Class B Equipment		$ 892,885

[fol. 1333]

Budget for 1961

Expense of Department Title Chlorate Acct. No. 4201

Detail Code	Expense Classification	Annual Amount	Employee	Salaries and Wages
100	Salaries	46,580	1 Chemist	
150	Telephone and Telegraph	260	1 Technician	
170	Supplies and Utilities	7,360	¼—3 foremen	
180	Travel and Entertainment	2,180	3 Operators	
273	Outside Services	435	1 Engineer	
290	Work Orders	132,780	¼ Secretary	
699	Miscellaneous	435	2 Clerks—⅓	
			½ Draftsman	
	Total	190,030		
	Overhead	40,914		
	Total With Overhead	230,944		

This project was disallowed by Block, although he left money in budget for negotiation purposes. No active program visualized at NH or NF.

[fol. 1334] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 265

Buyer's Contract No. OM-BA-818

Contract

American Potash & Chemical Corporation
Ninety-Nine Park Avenue, New York 16, N. Y.

Contract No.

New York, September 20, 1960

Seller: American Potash & Chemical Corporation.
Buyer: Olin Mathieson Chemical Corporation, Baltimore, Maryland.

The Seller agrees to sell and the Buyer agrees to purchase the following designated material during the period from January 1, 1961 to December 31, 1961 subject to the terms and conditions hereinafter stated:

Material: Sodium Chlorate Crystals (99.5% $NaClO_2$ minimum, .15% NaCl maximum, .2% H_2O maximum).

Quality: Technical Grade.

Quantity: Not less than 5,000 tons, nor more than 14,000 tons, unless otherwise mutually agreed.

Price: $.0809 per pound in Buyer's Cars, F.O.B. Hamilton, Mississippi or F.O.B. Henderson, Nevada, freight equalized with the lowest rail freight rate in effect at time of shipment (in either tank cars or bulk covered hopper cars) from the nearest competitive producing point in the United States to destination, less a discount of 5% on $.0809.

Terms Of Payment: To customers of established credit, terms are net cash against invoice, payable at Seller's office at 3000 West Sixth Street, Los Angeles 54, California. Invoices will be submitted monthly.

Deliveries: Shipments shall be made in not less than minimum car lots, as permitted by applicable railroad tariffs in effect at time of shipment, to destinations designated by Buyer. Not less than 25% of the total tonnage shipped each month under this contract will be made avail-[fol. 1335] able for shipment from Hamilton, Mississippi, the balance from Henderson, Nevada.

The terms and conditions set forth on the attachment marked "Appendix A" are hereby incorporated in and made a part of this contract.

Accepted:

J. C. Logan, Olin Mathieson Chemical Corporation.

American Potash & Chemical Corporation. By: W. J. O'Brien, Manager, Industrial Chemical Sales. Approved By: A. J. Dirksen.

[fol. 1336] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 267

AXXXXXXX-076 ICEX EXEC 18 9-22-60 225

Mr. Osborne Has Approved CAR no. 172-001-377C for $3,227,000 and Authorizes Your Proceeding with the Work While Awaiting FOPC Approval at the Next FOPC Meeting.

Janet Lee

9/23 copy for C. V. Mayne, R. C. Phillips, J. O. Logan and C. L. Williamson.

Recorded E. B., September 21, 1960.

[fol. 1337] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 268

Olin Mathieson Chemical Corporation

[Extracted]

Date: September 23, 1960.

To: Those Present at 460 Park Ave.
From: R. L. Dietrich at 460 Park Ave.
Subject: CAR Committee Meeting, September 20, 1960
Copy To: N. H. Collisson

The CAR Committee met at 10:00 a.m. on September 20, 1960. Present were:

R. Hopkinson
W. F. Otterstrom
H. J. Reed
W. F. O'Connell
A. T. Safford, Jr.
R. L. Dietrich

1) *CAR 172-001-377C;* $3,227,000; Chemicals Division—Calvert City, Ky.; Penn-Olin Chemical Company—Investment

Mr. H. J. Reed stated that the present CAR has been revised in accordance with the information developed by the Chemicals Division, Pennsalt and himself in Philadelphia and reported separately in his letter of August 22, 1960. It has been checked and the only differences in this and the preceding CAR are those made necessary by the revision in production capacity, plant cost and operating cost. This is the basis upon which the FOPC approved the project.

Mr. W. F. O'Connell stated that the market analysis provided was inadequate for the bankers with whom he is arranging to finance the project. As soon as he has a more satisfactory market survey, he can borrow the money for the project. It is anticipated that Olin Mathieson will finance half of its contribution and will borrow half without a commitment by the parent company. Pennsalt will finance

its share independently. Mr. O'Connell has been and will continue to press Mr. J. O. Logan for the market survey required. The Committee recommended approval.

. . . . . .

(p. 4)

R. L. Dietrich
RLD:vw

[fol. 1338] In United States District Court

Plaintiff's Exhibit 270

Pennsalt Chemicals Established 1850

Subject: Sodium Chlorate—Olin Mathieson Chemical—Intermountain Territory
Date: October 3, 1960
To: Mr. L. M. Shanaman
From: J. M. McCullough
Copies To: M32 L14

Week before last Olin Mathieson had three representatives in the Intermountain Territory making a complete survey of the uranium trade.

They also called on Carl Dewey and tried to set him up as a jobber. Carl Dewey's reply was that he was representing enough people now and that he was not interested. Presuming that he continues on this track, it is logical to believe that Olin Mathieson will try to set up a representative in that area through other jobbers, possibly in the Denver-Salt Lake area.

J.

JMM:mc

[fol. 1339] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 271

Penn-Olin Chemical Company
100 West 10th Street
Wilmington 99, Del.

October 7, 1960.

James McWhirter, President,
W. Cooper Willits, Treasurer.
Mr. John O. Logan,
Vice President
Penn-Olin Chemical Company
Mathieson Building
Baltimore 3, Maryland

Dear John:

We are forwarding herewith four copies of proposed appropriation request ID-001-PO covering facilities for the sodium chlorate plant being built at Calvert.

You will note that the appropriation request itself ignores after-tax earnings, management fees, etc. It was felt that the formal request should show a return of 19.5%, reflecting the basis on which decision was reached by the respective parent companies to undertake this project. A supplementary statement is attached which gives a more complete picture of the actual conditions contemplated, including corporate earnings, cash generation, etc.

It would be appreciated if you would review the form we have used and advise of your reaction.

Distributed to Board.

Sincerely, Mac.

JMcWhirter
ram
Attachments

[fol. 1340]

PENN-OLIN CHEMICAL COMPANY

APPROPRIATION REQUEST

TITLE	PROJECT CLASS	APPROPRIATION REQUEST NO.
SODIUM CHLORATE PLANT		ID-001-PO
PURPOSE (b) Production and Sale of 26,500 tons annually of Bulk Sodium Chlorate		AMOUNT REQUESTED (a) $7,247,000

COST AND RETURN (c)

CAPITAL INVESTMENT POLICY NO.

1. Fixed Project Capital	$ 6,447,000
2. Working Capital	$ 810,000
3. New Capital for Off-Site Facilities	$
4. Share of Existing Investment in Off-Site or Leased Facilities and Land	$
5. Total Investment	$ 7,257,000
6. Average Annual Sales	$ 4,078,000
7. Average Annual Profit Before Taxes	$ 1,414,000
8. Average Return Before Taxes on Total Investment over 10 Year(s)	19.5 % Per Year
9. Average Return on Pennsylvania Investment ~~Basis~~	% Per Year
10. Cash Pay-Out Period Straight Line Deprec. Basis - ~~Fixed Capital Only~~	6.4 Years
11. Average Earnings Per Share	$ – Per Share

CASH GENERATED (d)

ANNUAL SCHEDULE

(000's)

1st	2nd	3rd	4th	5th	6th	7th
$ 763	1,077	1,077	1,077	1,077	1,077	1,077

CAPITAL EXPENDITURES

QUARTERLY SCHEDULE FROM DATE OF APPROVAL

4th 1960 1st 1961 2nd 1961 3rd 1961 4th 1961

(000's)

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 547	1,000	2,600	2,000	300			

COMPLETION DATE

NO. OF MONTHS REQUIRED FROM DATE OF APPROVAL

BEFORE TRIAL OPERATION BEGINS	BEFORE COMMERCIAL OPERATION BEGINS

CAPITAL INVESTMENT POLICY NO.

(c) COST AND RETURN

1. Fixed Project Capital	$ 6,447,000
2. Working Capital	$ 810,000
3. New Capital for Off-Site Facilities	$
4. Share of Existing Investment in Off-Site or Leased Facilities and Land	$
5. Total Investment	$ 7,257,000
6. Average Annual Sales	$ 4,078,000
7. Average Annual Profit Before Taxes	$ 1,414,000
8. Average Return Before Taxes on Total Investment over 10 Year(s)	19.5 % Per Year
9. Average Return on Personal Investment	% Per Year
10. Cash Pay-Out Period Straight Line Deprec. Basis - Fixed Capital Only	6.4 Years
11. Average Earnings Per Share	$ - Per Share

(d) CASH GENERATION

ANNUAL SCHEDULE

($000's)

1st	2nd	3rd	4th	5th	6th	7th
$ 763	1,077	1,077	1,077	1,077	1,077	1,077

CAPITAL EXPENDITURES

QUARTERLY SCHEDULE FROM DATE OF APPROVAL

($000's)

4th 1960 1st 1961 2nd 1961 3rd 1961 4th 1961

1st	2nd	3rd	4th	5th	6th	7th	8th
$ 547	1,000	2,600	2,000	300			

COMPLETION DATE

NO. OF MONTHS REQUIRED FROM DATE OF APPROVAL

BEFORE TRIAL OPERATION BEGINS	BEFORE COMMERCIAL OPERATION BEGINS
10-1/2 - September 1, 1961	13-1/2 - December 1, 1961

APPROVAL

Recommended By	Date	Appropriation Committee	Date
Recommended By	Date	President	Date
Approved By	Date	Board	Date

Amount Included in Approved Capital Budget for Current Year	$
Amount Included in Program for Future Growth (Five Years Total)	$
Identified in the Capital Budget - Program for Future Growth As:	

[fol. 1341] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 282

Pennsalt Chemicals

Subject: Banker's Life-Travel Accident Policy
Date: November 23, 1960
To: Messrs. Collins, LaLande, Land, Lawson, McWhirter, Willits
From: W. Penfield
Copies To: C20, C92, D11, L90

The subject policy is written to cover Pennsalt and/or subsidiary and affiliated companies named in the policy. We are permitted to add or remove subsidiaries and affiliates from the listing as circumstances may from time to time require. At the present time the revised listing sent in for inclusion in the policy is as follows:

Calvert City Chemical Company
Industrial Quimica Pennsalt S.A. de C.V. (Mexico City)
International Canadian Corporation
Keystone Chemicals Limited
Minerales Pennsalt S.A. de C.V. (San Luis Potosi, SLP, Mexico)
Penn-Olin Chemicals Co. (limited to named Pennsalt employees while engaged in Penn-Olin activities)
Pennsalt Carriers Corporation
Pennsalt Chemicals of Canada Limited
Pennsalt de Mexico, S.A. (Mexico)
Pennsalt International Corp.—Western Hemisphere
Solar Salt Company
Wyandotte Southern Railroad Company

Please notify me at once if there should be any subsidiaries or affiliates added to this list, also if in your opinion any need be removed. In addition, please within ten days of the formation of any new subsidiary notify me of its formation, also telling me the names of any Pennsalt officers or employees who, even if they remain as Pennsalt employees, have also acquired officer or employee status in

the subsidiary or affiliate. This covers only such officers or employees whom we wish to cover under the policy. As further definition we cite the example of Messrs. McWhirter and Willits who have officer and director status in Penn-Olin. Penn-Olin, incidentally, classifies as an affiliate rather than a subsidiary by reason of the fact that Pennsalt does not own a majority of its voting stock.

It is particularly important that you notify me promptly and specifically of any changes of the nature mentioned above because Banker's Life have the reputation of recognizing claims only where those covered are clearly within the scope of the policy.

W.P.

WP:vb

[fol. 1342] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 286

December 21, 1960.

Mr. R. Kennedy, Niagara Falls
J. J. Garland, Baltimore
Penn-Olin Sodium Chlorate Hopper Cars

J. E. Baker,
C. C. Hightower,
J. G. Johns.

Beginning the first of January, 1961 the Penn-Olin Corporation, through Olin Mathieson as sales agent, will supply a portion of the sodium chlorate requirements at Niagara Falls.

You are probably familiar with the new hopper car that will be used. Nevertheless, we are sending along some detailed information concerning the car as well as the methods to be employed for unloading it. You will note that the recirculating hose coupler differs from the connection required for tank cars which you are now using. The attached literature points out the changes that should be made in the recirculating hose. We have sent to your attention today via air-express, a "Kanlok" 633-D aluminum coupler

which is to be attached to the unloading connector as described. We plan to have a Technical Service representative present when the first Penn-Olin chlorate shipment arrives at Niagara Falls to supervise and observe unloading. I assume this will be sometime in January 1961. I will be in touch with you directly to establish the exact date. Meanwhile, if you should have any questions concerning the modifications necessary, please contact us.

J. J. Garland.

enc.

PLAINTIFF'S EXHIBIT 287

CJ-15057-4 (9-60)

CREDIT DEPT.
RATING AA1
JAN 13 1961

ORIGINAL

Contract No. SCpy7

OLIN MATHIESON CHEMICAL CORPORATION

CHEMICALS DIVISION

Baltimore, December 22, 1960

OLIN MATHIESON CHEMICAL CORPORATION, (hereinafter called the Seller) agrees to sell to WEST VIRGINIA PULP & PAPER CO., 230 PARK AVE., NEW YORK 17, N. Y. (hereinafter called the Buyer), and the Buyer agrees to purchase from the Seller, the following merchandise:-

Product and Quantity	Not less than 500 Tons nor more than 500 Tons per annum of SODIUM CHLORATE CRYSTALS, representing Buyer's partial or entire requirements, to be shipped from production at Seller's shipping point(s). As indicated below.
Delivery Period	From January 1, 1961 To December 31, 1961
Package	In Seller's cars
Price	EIGHT DOLLARS AND FIFTEEN CENTS ($8.15) per hundred pounds. F.O.B. Seller's shipping points, Henderson, Nevada; Portland, Oregon; Hamilton, Mississippi; or Calvert City, Kentucky; freight equalized with the lowest rail freight rate applicable at time of shipment (in either bulk covered hopper cars or tank cars) from the nearest competitive producing point to destination.
Destination of Shipments	Covington, Virginia, Luke, Md., and/or Tyrone, Pa. Wm.
Terms of Payment	Net cash in thirty (30) days from date of invoice.

OLIN INT 8932
D-163
60 lbs sides
Gaylord
Va - Tx

(hereinafter called the Buyer), and the Buyer agrees to purchase from the Seller, the following merchandise:

Product and Quantity	Not less than 500 Tons nor more than 500 Tons per annum of SODIUM CHLORATE CRYSTALS, representing Buyer's partial or entire requirements, to be shipped from production at Seller's shipping point(s). As indicated below.
Delivery Period	From January 1, 1961 To December 31, 1961
Package	In Seller's cars
Price	EIGHT DOLLARS AND FIFTEEN CENTS ($8.15) per hundred pounds. F.O.B. Seller's shipping points, Henderson, Nevada; Portland, Oregon; Hamilton, Mississippi; or Calvert City, Kentucky; freight equalized with the lowest rail freight rate applicable at time of shipment (in either bulk covered hopper cars or tank cars) from the nearest competitive producing point to destination.
Destination of Shipments	Covington, Virginia; Luke, Md., and/or Tyrone, Pa. w/tns.
Terms of Payment	Net cash in thirty (30) days from date of invoice.
FURTHER TERMS AND CONDITIONS	The terms and conditions printed on the reverse side hereof are a part of this contract as effectively as though they preceded the signatures of the parties. This contract is not valid until accepted and signed by Seller.

OLIN 1107-50.52 D-163 60 lbs. sks Gaylord Va-Ky

Accepted:

WEST VIRGINIA PULP & PAPER CO.,

By W. F. Merrilees, P.A.

1/27/61.

W. F. Merrilees, P.A.

Notice 1/31/61 pc

Accepted:

CHEMICALS DIVISION
OLIN MATHIESON CHEMICAL CORPORATION

By J. G. Johns

J. G. JOHNS, GENERAL SALES MANAGER
Heavy Chemicals
Industrial Chemicals

698

[fol. 1344] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 288

Olin Mathieson Chemical Corporation
Chemicals Division
Mathieson Building Baltimore 3, Maryland

December 30, 1960.

Mr. Roy Shanaman, Sales Manager
Heavy Chemicals Division
Pennsalt Chemicals Corporation
2901 Taylor Way
Tacoma 2, Washington

Dear Roy:

At your suggestion I am listing below a basis for handling our sodium chlorate purchases which is consistent with the purchase arrangements for the balance of our requirements. It would greatly simplify our paper work if you are able to work with us on the same basis.

1. *Quantity:* Pennsalt will sell to Olin Mathieson, as Penn-Olin's sales agent, 1,800 to 3,000 tons of sodium chlorate for the period commencing January 1, 1961 and continuing until Calvert City production is sufficient to supply Penn-Olin requirements.

2. *Price:* $.0809 per pound in buyer's cars, f.o.b. Portland, Oregon, freight equalized with the lowest rail freight in effect at time of shipment (in either tank cars or bulk covered hopper cars) from competitive producing points in the United States to destination, less a discount of 5% on $.0809.

3. *Terms:* Net cash, 30 days.

4. *Invoicing:* Pennsalt will invoice Olin, as Penn-Olin's sales agent, on date of shipment at $.0809, less 5% resale discount, less freight equalization. Where shipments are made by mutual agreement to Olin tracks for "storage in transit" Pennsalt will withhold invoicing pending notification of release of shipment to final destination.

[fol. 1345] 5. *Transportation:* Shipments will be made freight collect excepting those cars consigned to Olin storage tracks, in which case mutually agreeable arrange-

ments for handling of freight charges will be worked out. Olin will provide Pennsalt with lease agreement covering buyer's cars in seller's plant for loading and storage, with Olin bill of lading forms, and with routing and rating information.

If the above arrangements meet with your approval, they will enable us to standardize our paper work regardless of the origin of the shipment and give us a good deal more flexibility in handling Portland tonnage.

Yours very truly, J. B. Johns, General Sales Manager, Heavy Chemicals.

Accepted:

Roy Shanaman, 1/9/61

cc: Mr. A. Clem, Pennsalt Chemicals Corporation, 3 Penn Center, Philadelphia 2, Pennsylvania.

[fol. 1346] In United States District Court

Plaintiff's Exhibit 289

Olin Mathieson Chemical Corporation

December 30, 1960.

bcc: J. O. Logan
C. L. Williamson
H. S. Hopkins
V. Woodside
W. A. Powers
J. G. McMullen

Mr. Roy Shanaman
Pennsalt Chemicals Corporation
2901 Taylor Way
Tacoma 2, Washington

Dear Roy:

Attached for your consideration is a suggested letter agreement covering that part of the Penn-Olin chlorate requirement which I understand you would be interested in supplying. I have purposely set the lower limits at the lowest minimum discussed with both you and Hugh and the

maximum at the 3,000 ton figure which you suggested. We shall do our very best to work out these arrangements so that they are satisfactory both as to quantity and timing.

I might mention that delays which held up the first deliveries of our hopper cars until late December forced us to shift the first few of these cars to Mississippi in order to meet customer delivery schedules. We are planning to shift some cars out to Portland in January to supplement the four or five cars which you will transfer to us.

We are also planning to load some of these cars on arrival and shift them to our holding tracks at Lake Charles so that we can move as much Portland material as possible early in 1961. At present we can accommodate up to eight cars on the Lake Charles holding tracks, and we would be willing to hold the maximum number of cars there if this would be convenient to you from an inventory standpoint; otherwise, we will normally have two to six cars there to take care of spot orders and short notice deliveries.

I am not quite certain if it is your desire that we begin handling deliveries for you to such points as Canton, N. C.; Demopolis, Ala.; Foley, Fla., etc., or if it is your intention that we should pick these deliveries up after Calvert City comes on stream. We will have ample cars to take care of such deliveries on a spot basis. I am also uncertain as to whether your estimates for these tonnages were included as a part of the above tonnage available for resale by Penn-Olin.

I believe our Technical Service people have already been in touch with Mr. Shera and arranged to supply drawings of our chlorate cars to facilitate replacement of your sparger tube hose coupling with the type that is standard for the Penn-Olin car connections.

Mr. Walt Powers, our manager of transportation equipment, will follow the matters of repainting and the minor change in the sparger tube hose coupling with your local Traffic people so that our Acid-Sulfur people can arrange for loading of these cars as soon as they are available.

I believe these suggestions are along the lines of our discussion; however, if I have overlooked anything, please let me hear from you.

Yours very truly, J. G. Johns.

Attachments

[fol. 1347]. In United States District Court

Plaintiff's Exhibit 294

Minutes of First Meeting of Board of Directors of Penn-Olin Chemical Company

The first meeting of the Board of Directors of Penn-Olin Chemical Company was held at 10 Light Street, Baltimore, Maryland, at 10:00 A.M., on March 8, 1960, pursuant to a consent and waiver of notice signed by all the directors of this Company.

The following directors were present, constituting a quorum of the Board of Directors:

Messrs. James McWhirter,
J. G. Johns,
W. Alfred LaLande, Jr.,
John O. Logan,
Albert H. Clem,
Cecil L. Williamson,
W. Cooper Willits

Also present at the invitation of the Board, were Messrs. Edwin E. Tuttle, Minturn Wright and C. V. Mayne.

Mr. James McWhirter was chosen temporary chairman and Mr. Cecil L. Williamson was chosen temporary secretary of the meeting.

The secretary presented and read the consent and waiver of notice of the meeting, signed by all the directors of the Company, which was ordered filed with the minutes of the meeting.

The minutes of the meeting of the incorporators were read and approved.

1. Election of Officers

The following persons were nominated for officers of the Company to serve until their respective successors are chosen and qualify:

President—James McWhirter
Vice President—John O. Logan
Secretary—Cecil L. Williamson
Treasurer—W. Cooper Willits

[fol. 1348] All the directors present having voted, the chairman announced that the aforesaid persons had been unanimously elected to the offices set before their respective names.

The president and the secretary thereupon entered upon the discharge of their duties.

2. Approval of By-Laws

The President stated that the By-Laws of the Company had been prepared and reviewed by counsel for Pennsalt Chemicals Corporation and Olin Mathieson Chemical Corporation, and approved at the first meeting of the Incorporators of the Company held on February 29, 1960. He presented to the meeting a copy of the By-Laws.

Thereupon, after consideration of such By-Laws, the following resolution, on motion duly made by Mr. John O. Logan, and seconded by Mr. W. Cooper Willits, was unanimously adopted.

> "Resolved, That the By-Laws of this Company, in the form approved and adopted at the First Meeting of the Incorporators of this Company, held on February 29, 1960, be, and they hereby are, in all respects approved and adopted as the By-Laws of this Company."

3. Form of Stock Certificate

The President presented to the meeting a form of stock certificate to evidence ownership of shares of capital stock of the Company.

Thereupon, after the terms and provisions of the stock certificate were read to the meeting, the following resolution, on motion duly made by Mr. W. Cooper Willits, and seconded by Mr. John O. Logan, was unanimously adopted:

> "Resolved, That the form of stock certificate presented and read to this meeting be, and it hereby is, approved and adopted, and that the Secretary be instructed to insert a specimen thereof in the Minute Book."

4. Corporate Seal

The President presented to the meeting a form of seal proposed for use as the corporate seal of the Company.

Thereupon, the following resolution, on motion duly made by Mr. J. G. Johns, and seconded by Mr. Albert H. Clem, was unanimously adopted:

[fol. 1349] "Resolved, That the seal, an impression of which is hereto affixed, be and it is hereby adopted as the corporate seal of the Company."

The Secretary was authorized and directed to procure the proper corporate books.

5. Bank Account

The President stated that it would be necessary to open a bank account for use in the normal operations of the business.

Thereupon, the following resolutions, on motion duly made by Mr. Cecil L. Williamson, and seconded by Dr. W. Alfred LaLande, were unanimously adopted:

"Resolved that the Treasurer of this corporation be and is hereby authorized to open and/or maintain a bank account with The First Pennsylvania Banking and Trust Company in the name and for the use of this corporation and to deposit in said account from time to time certain moneys, checks, drafts, notes and acceptances, or other evidences of indebtedness which may nor or hereafter be in possession of this corporation; and that until otherwise ordered, said Bank be and hereby is authorized to make payments from said account upon and according to the check, draft, note, or order of this corporation when signed by any of the following officers:

President, Vice President, Secretary, Treasurer

and to receive the same when so signed for the credit of, or in payment from the payee or any other holder without inquiry as to the circumstances of their issue or the disposition of their proceeds, whether drawn to the individual order or tendered in payment of individual obligations of the officers above named or other officers of this corporation or otherwise."

"Be it Further Resolved, That all checks for $25,000 or more shall be drawn only upon the prior approval in

writing by the President or Treasurer and by the Vice President or Secretary."

6. Resident Agent

The President stated that it was in order to appoint a resident agent of the Company in the State of Delaware. [fol. 1350] Thereupon, the following resolution on motion duly made by Mr. John O. Logan, and seconded by Mr. Cecil L. Williamson, was unanimously adopted:

"Resolved, That The Corporation Trust Company as the resident agent of this Company, in charge of the principal office in Delaware and of the books required by law to be kept in that office, and as the agent upon whom process against this Company may be served shall act under the direction and supervision of counsel for this Company in all matters arising out of or pertaining to such agency, including the forwarding of process served, official notices, and communications, and all service bulletins covering report and tax requirements, and the Secretary is hereby authorized to sign a certificate in accordance with this resolution."

7. Regular Board Meetings

The President suggested that a definite time and place be established for regular Board meetings.

Thereupon, the following resolution, on motion duly made by Mr. Cecil L. Williamson, and seconded by Mr. Albert H. Clem, was unanimously adopted:

"Resolved, That until otherwise ordered regular meetings of the Board of Directors shall be held on the second Tuesday of the first month of each calendar quarter at such time and place as the Board shall determine at the previous meeting."

8. Coordination Committee

The President recommended that a four-member Coordination Committee be appointed to coordinate matters involving the normal operation and management of the Company during intervals between meetings of the Board.

Thereupon, the following resolutions, on motion duly

made by Dr. W. Alfred LaLande, and seconded by Mr. J. G. Johns, were unanimously adopted:

"Resolved, That there be and hereby is established a Coordination Committee to consist of four members of the Board of Directors, which shall have and may exercise all the powers of the Board; during the intervals between meetings of the Board, in the normal operation and management of the business and affairs of this Company, including the power to authorize the seal of this Company to be affixed to all papers which may require it.

[fol. 135] "Be it Further Resolved, [That the Coordination Committee shall keep regular minutes of its proceedings and report all actions taken to the Board at the meeting thereof next succeeding the taking of such action;] that the members of the Coordination Committee shall act only as a committee and the individual members thereof shall have no power as such; that the presence at any meeting of the Coordination Committee of three members thereof shall be necessary to constitute a quorum for the transaction of business, and in every case the affirmative vote of three members of the Coordination Committee shall be necessary for the adoption of any resolution; and that the Coordination Committee shall fix its own rules of procedure and shall meet where and as provided by such rules.

"Be it Further Resolved, That Messrs. J. L. Wood, John O. Logan, W. Cooper Willits and James McWhirter, be and they are hereby designated as members of the Coordination Committee."

9. Issuance of Capital Stock

The President recommended that in order to provide the minimum capital necessary under Delaware law and the Company's Certificate of Incorporation to commence business, the Board of Directors should approve a call on Pennsalt Chemicals Corporation and Olin Mathieson Chemical Corporation for the purchase of one share by each of the Capital Stock at a price of $1,000.00 in cash, all of which would be allocated to the Company's capital account.

Thereupon, the following resolution, on motion duly made by Mr. John O. Logan, and seconded by Dr. W. Alfred LaLande, was unanimously adopted:

> "Resolved, That this Company call upon Pennsalt Chemicals Corporation and Olin Mathieson Chemical Corporation to purchase respectively one (1) share of Capital Stock par value $1.00 per share of this Company, at a price of $1,000.00 per share in cash, and that the entire cash consideration of $2,000.00 received by this Company in payment for said shares of Capital Stock shall be allocated to capital."

10. Fees and Expenses of Organization

The President stated that provision should be made for reimbursement of the fees and expenses incurred in the organization of the Company.

Thereupon, the following resolution, on motion duly made by Mr. W. Cooper Willits, and seconded by Mr. Cecil L. Williamson, was unanimously adopted:

> [fol. 1352] "Resolved, That subject to the prior approval of the Coordination Committee, the Treasurer be and he is hereby authorized to pay all fees and expenses incident and necessary for the organization of this Company."

11. Next Meeting

By unanimous consent the next Board Meeting will be held at 10:00 A.M., on April 12, 1960, at Three Penn Center, Philadelphia, Pennsylvania.

12. Adjournment

On motion of Mr. John O. Logan, seconded by Mr. Albert H. Clem, the meeting was adjourned.

C. L. Williamson, Secretary.

[fol. 1353] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 295

Olin Mathieson Chemical Corporation

Date: 4/22/60.

To: Mr. James McWhirter at Pennsalt Chemicals Corporation
From: C. L. Williamson at OMCC
Subject:

Dear Jim:

The attached stock certificates No. 1 and No. 2, in favor of Pennsalt and OMCC, respectively, require your signature as President.

After signing same, please see that certificate No. 2, in our favor, is returned to me and you will want to process your own certificate as your judgment dictates.

With kindest regards,

Sincerely, C. L. Williamson.

Attachments (2)

[fol. 1354] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 299

Penn-Olin Chemical Company
100 West 10th Street
Wilmington 99, Del.

November 9, 1960.

James McWhirter, President
W. Cooper Willits, Treasurer
Copy

Bryce, Send Ck.—OC

Mr. Walter F. O'Connell, Vice President
Olin Mathieson Chemical Corporation
460 Park Avenue, New York 22, New York

Dear Walter:

At the quarterly meeting of the Board of Directors of Penn-Olin Chemical Company held on October 20th in Baltimore, the following resolution was unanimously adopted:

> Resolved, that the Corporate Finance Officers of Olin Mathieson Chemical Corporation and Pennsalt Chemicals Corporation be and they hereby are authorized and directed to make calls jointly in behalf of Penn-Olin Chemical Company upon Olin Mathieson Chemical Corporation and Pennsalt Chemicals Corporation for funds as needed, in keeping with the Letter Agreement dated February 11, 1960 and the definitive joint venture agreement to be entered into pursuant thereto.

As you probably know, considerable expenses have been incurred to date which have been borne by the respective parents, and in order to clarify this matter, I believe it would now be advisable for each parent to invest an additional $75,000 in Penn-Olin (at present each parent has invested $1,000) and thereby enable the parents to clear up these deferred expenses.

OK, WOC.

If you are in accord with this recommendation, will you please forward me on behalf of the Olin Mathieson Chemical Corporation a check in the amount of $75,000 payable to Penn-Olin Chemical Company. I in turn will have Pennsalt issue a similar check and, upon receipt of both checks, deposit them in the Penn-Olin Chemical Company account at the First Pennsylvania Banking and Trust Company.

When C. L. Williamson, Secretary of Penn-Olin Chemical Company, receives confirmation of these deposits, he will issue to each parent 75 shares of Penn-Olin Chemical Company common stock with a par value of $1,000 per share.

[fol. 1355] Should you have any questions regarding this matter during my absence for the next ten days, please call Edwin E. Tuttle, Controller, Pennsalt Chemicals Corporation, who is entirely familiar with the situation.

Sincerely yours, W. Cooper Willits, Treasurer.

wcw/r

[fol. 1356] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 300

Olin Mathieson Chemical Corporation

November 11, 1960.

Mr. W. Cooper Willits, Treasurer
Penn-Olin Chemical Company
3 Penn Center
Philadelphia 2, Pennsylvania

Dear Mr. Willits:

Attached is Olin Mathieson Chemical Corporation check for $75,000, payable to Penn-Olin Chemical Company. These funds are payment for 75 shares of Penn-Olin Chemical Company common stock, in accordance with your letter of November 9th to Walter F. O'Connell.

We understand that the 75 shares will be sent to us by C. L. Williamson as soon as you notify him that these funds have been received.

Very truly yours, Richard Bryce.

Encl.

cc—Mr. Walter F. O'Connell, Mr. C. L. Williamson.

Note to Mr. Williamson

When you send us these shares for safekeeping in the company vault here, will you please also send the one share which has previously been paid for, making a total of 76 shares in all.

[fol. 1357] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 302

Copy to R. Bryce

Penn-Olin Chemical Company
100 West 10th Street
Wilmington 99, Del.

December 23, 1960.

James McWhirter, President
W. Cooper Willits, Treasurer
Mr. Walter F. O'Connell, Vice President
Olin Mathieson Chemical Corporation
460 Park Avenue, New York 22, New York

Dear Walter:

As agreed last week, I am pleased to enclose a schedule of estimated capital requirements for Penn-Olin. Capital expenditures to date are just about on schedule, and it is expected by December 31, 1960, that the following items will be paid or payable:

Field Engineering Charges	$ 280,000
United Engineers & Constructors, Inc.—	
Engineering Charges	190,000
Pennsalt Engineering	40,000
	$ 510,000

As you are aware, $152,000 has been received from the parent companies. Of this amount, $2,000 represented the initial investment made sometime ago and $150,000 the call made last November. The difference, $358,000, ($510,000—$152,000) has been or will be borne by Pennsalt by the end

of the year unless a call for additional funds is made. Naturally, we would like to clear this item off our books by year-end.

Accordingly, as resolved at the quarterly meeting of the Board of Directors of Penn-Olin on October 20, I ask that you join me in requesting that each parent invest an additional $200,000 in Penn-Olin, which will certainly be adequate to take care of these expenses.

OK, WOC, per RJT.

If you are in accord with this recommendation, will you please forward me on behalf of the Olin Mathieson Chemical Corporation a check in the amount of $200,000 payable to Penn-Olin Chemical Company. I in turn will have Pennsalt issue a similar check and, upon receipt of both checks, deposit them in the Penn-Olin Chemical Company account at the First Pennsylvania Banking and Trust Company. [fol. 1358] When C. L. Williamson, Secretary of Penn-Olin Chemical Company, receives confirmation of these deposits, he will issue to each parent 200 shares of Penn-Olin Chemical Company common stock with a par value of $1.00 per share.

As suggested, I am enclosing an additional copy of this schedule for Richard Bryce, Treasurer of Olin Mathieson.

With best *best* for a happy holiday season, I am

Sincerely yours, W. Cooper Willits, Treasurer.

wcw/r

cc to Messrs. Williamson, Logan, McWhirter, Niederriter, Tuttle.

[fol. 1359] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 303

Olin Mathieson Chemical Corporation
460 Park Avenue
New York 22, New York

December 29, 1960.

Please acknowledge

Mr. W. Cooper Willits, Treasurer
Penn-Olin Chemical Company
3 Penn Center
Philadelphia 2, Pennsylvania

Dear Mr. Willits:

Attached is Olin Mathieson Chemical Corporation check for $200,000, payable to Penn-Olin Chemical Company. These funds are payment for 200 shares of Penn-Olin Chemical Company common stock, in accordance with your letter of December 23rd to Walter F. O'Connell.

We understand that the 200 shares will be sent to us by C. L. Williamson as soon as you notify him that these funds have been received.

Very truly yours, Donald R. Jackson, First Asst. Treas.

Encl.

[fol. 1360] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 305

January 6, 1961.

Mr. C. L. Williamson, Secretary
Penn-Olin Chemical Company
Mathieson Building
Baltimore 3, Md.

Dear Mr. Williamson:

Mr. Willits is again out of town so I am writing this letter in his stead.

I am attaching, first of all, a deposit slip recording the January 3 deposit to the Penn-Olin account of $400,000. This represents $200,000 from Pennsalt and $200,000 from Olin, against which 200 shares of Penn-Olin stock should be issued to each company in accordance with the regular procedure.

Secondly, I am attaching an invoice from Pennsalt to Penn-Olin amounting to $302,490.86 covering Pennsalt expenditures for the Chlorate plant which are chargeable to Penn-Olin. This invoice has been approved by Mr. McWhirter, and I would appreciate your adding your approval, returning the original to me so that we can draw the necessary check.

Yours very truly, Edwin E. Tuttle, Controller.

EET:EF
(Encl.)
C13
M44-N22
W1

[fol. 1361] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 306

Penn-Olin Chemical Company
100 West 10th Street
Wilmington 99, Del.

January 9, 1961.

J. O. Logan, Vice President.
C. L. Williamson, Secretary.
Mr. W. Cooper Willits, Treasurer
Pennsalt Chemicals Corporation
3 Penn Center
Philadelphia 2, Pennsylvania

Dear Mr. Willits:

This will serve to certify that $76,000.00 has been received from Olin Mathieson Chemical Corporation along with a like sum from Pennsalt Chemicals Corporation.

Deposits have been made of said sums, and the stock certificates have not yet been issued, but we expect that they will be in the relative near future.

With best regards,

Very truly yours, Penn-Olin Chemical Company, C. L. Williamson, Secretary.

CLW:mcs

[fol. 1362] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 308

Penn-Olin Chemical Company
100 West 10th Street

Wilmington 99, Del.

January 13, 1961.

J. O. Logan, Vice President.
C. L. Williamson, Secretary.
Mr. W. Cooper Willits, Treasurer

Pennsalt Chemicals Corporation
3 Penn Center
Philadelphia 2, Pennsylvania

Dear Mr. Willits:

This will serve to certify that during the year 1960 Penn-Olin Chemical Company received from Pennsalt Chemicals Corporation $76,000.00, for which common stock is to be issued. To date, one share of stock has been issued, and the certificates for the remaining 75 shares will be issued in the relatively near future.

Very truly yours, Penn-Olin Chemical Company,
C. L. Williamson, Secretary.

CLW:mcs

[fol. 1363] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 309

Olin Mathieson Chemical Corporation
460 Park Avenue, New York 22, New York

January 18, 1961.

Mr. C. L. Williamson, Secretary
Penn-Olin Chemical Company
10 Light Street
Baltimore 3, Maryland

Dear Mr. Williams:

In connection with the year end audit of our books, will you please confirm directly to our auditors, Peat, Marwick, Mitchell & Co., 70 Pine Street, New York 5, New York, that as of December 31, 1960, you received from Olin Mathieson Chemical Corporation $276,000 in payment of 276 shares of common stock, $1.00 par value, of Penn-Olin Chemical Company.

Will you further confirm that these shares were not issued or delivered to Olin Mathieson Chemical Corporation as of December 31, 1960.

We are enclosing a copy of this letter which you may sign as a confirmation of the above. A stamped self-addressed envelope is also enclosed for your convenience.

Replied 3/3/61.

Very truly yours, Donald R. Jackson, First Asst. Treas.

[fol. 1364] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 310

Penn-Olin Chemical Company
100 West 10th Street
Wilmington 99, Del.

February 3, 1961.

James McWhirter, President.
W. Cooper Willits, Treasurer.
Mr. Walter F. O'Connell, Vice President
Olin Mathieson Chemical Corporation
460 Park Avenue, New York 22, New York

Dear Walter:

Since the last settlement between Penn-Olin Chemical Company and Pennsalt, covering which statements have been rendered, we have accumulated expenditures somewhat in excess of $200,000. This amount is about in line with the schedule of estimated expenditures which was attached to my letter to you dated December 23, 1960.

In view of the fact that these costs have already been borne with Pennsalt funds, I ask that you join me in requesting that each parent invest an additional $100,000 in Penn-Olin. If you are in accord with this recommendation, will you please forward me on behalf of the Olin Mathieson Chemical Corporation a check in the amount of $100,000 payable to Penn-Olin Chemical Company. I, in turn, will have Pennsalt issue a similar check and, upon receipt of both checks, deposit them in the Penn-Olin Chemical Company account at the First Pennsylvania Banking and Trust Company.

When C. L. Williamson, Secretary of Penn-Olin Chemical Company, receives confirmation of these deposits and the agreements have been executed, he will issue to each parent 100 shares of Penn-Olin Chemical Company common stock covering this investment.

I am enclosing for your information a Penn-Olin Balance Sheet as of December 31, 1960.

Sincerely yours, W. Cooper Willits, Treasurer.

wcw/r
encl.

cc to Messrs. Logan and Williamson

[fol. 1365] In United States District Court

Plaintiff's Exhibit 311

Olin Mathieson Chemical Corporation

February 9, 1961.

Mr. W. Cooper Willits, Treasurer
Penn-Olin Chemical Company
3 Penn Center
Philadelphia 2, Pennsylvania

Dear Mr. Willits:

Attached is Olin Mathieson Chemical Corporation check for $100,000, which is to be treated as an advance to Penn-Olin Chemical Company.

In the attachment to your letter of February 3rd to Mr. W. F. O'Connell—Notes to Balance Sheet—the following statement is made: "As of December 31, 1960, stock certificates have not been issued to Pennsalt Chemicals Corporation and Olin Mathieson Chemical Corporation for respective purchases of 75 shares on November 17, 1960, and 200 shares on January 3, 1961." It is our understanding that we have paid for a total of 276 shares of stock, as our initial disbursement was for $1,000, covering one share of stock. Will you please let me know whether this is correct.

Very truly yours, ——, ——.

DRJ:lhp
Encl.

cc—Mr. Walter F. O'Connell, Mr. C. L. Williamson.

[fol. 1366] In United States District Court

Plaintiff's Exhibit 312

Penn-Olin Chemical Company

February 10, 1961.

Mr. Richard Bryce, Treasurer
Olin Mathieson Chemical Corporation
460 Park Avenue
New York 22, New York

Dear Mr. Bryce:

This will acknowledge with thanks Olin Mathieson Chemical Corporation's check in the amount of $100,000, transmitted with your letter of February 9.

The "Notes to the Balance Sheet" and your understanding regarding the number of shares purchased to date are both correct. A stock certificate was issued for the first share purchased. Since then the Secretary of Penn-Olin Chemical Company has not seen fit to issue additional shares, pending execution of certain agreements. Mr. Williamson has furnished us with the following certification:

> "This will serve to certify that during the year 1960 Penn-Olin Chemical Company received from Pennsalt Chemicals Corporation $76,000.00, for which common stock is to be issued. To date, one share of stock has been issued, and the certificates for the remaining 75 shares will be issued in the relatively near future."

The certification, as you see, covers only the calendar year 1960, the additional 200 shares having been purchased as of January 3, 1961.

Very truly yours, W. Cooper Willits, Treasurer.

wcw/r

cc Mr. O'Connell
Mr. Williamson

[fol. 1367] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 313

Pennsalt Chemicals Corporation

Three Penn Center, Philadelphia 2, Pennsylvania

February 17, 1961

Mr. C. L. Williamson, Secretary
Penn-Olin Chemical Company
Mathieson Building
Baltimore 3, Md.

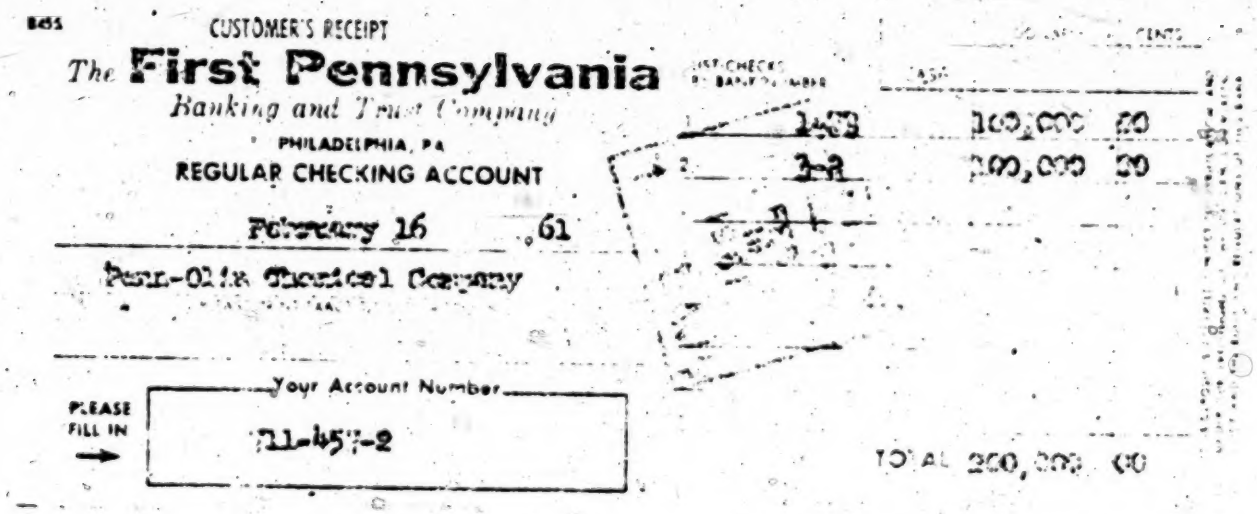
Dear Mr. Williamson:

I am attaching a copy of the deposit slip covering the February 16 deposit to the Penn-Olin account of $200,000. This represents $100,000 from Pennsalt and $100,000 from Olin, against which 100 shares of Penn-Olin stock should be issued to each company in accordance with the regular procedure.

Yours very truly, Edwin E. Tuttle, Controller.

EET:EF
(Encl.)

[fol. 1368]



CUSTOMER'S RECEIPT

The First Pennsylvania
Banking and Trust Company
PHILADELPHIA, PA
REGULAR CHECKING ACCOUNT

February 16 61

Penn-Olin Chemical Company

Your Account Number
21-457-2

PLEASE FILL IN

LIST CHECKS BY BANK'S NUMBER	DOLLARS	CENTS
1453	100,000	00
1454	100,000	00
TOTAL	200,000	00

YOUR BUSINESS IS APPRECIATED

895

[fol. 1369] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 314

Penn-Olin Chemical Company
100 West 10th Street
Wilmington 99, Del.

March 14, 1961.

James McWhirter, President.
W. Cooper Willits, Treasurer.
Mr. Walter F. O'Connell, Vice President
Olin Mathieson Chemical Corporation
460 Park Avenue, New York 22, New York

Dear Walter:

Expenditures during the month of February amounted to $246,589.01 and have been borne by Pennsalt, and a detailed statement has been sent to Cecil Williamson for his approval as Secretary. As of today, the Penn-Olin checking account has a balance of $54,932.37. Accordingly, once Cec Williamson approves payment of the aforementioned expenditures, funds in bank will be inadequate to cover payment. I, therefore, suggest that another call be made for funds on the part of both parents in the total amount of $248,000.

While it is true that a $200,000 call would be adequate to cover these February expenditures, my reason for selecting the higher amount is that it will make a total contribution of $1,000,000 ($500,000 per parent). As you know, it is presently anticipated that total parental financing will exist of $1,000,000 in equity and $2,000,000 of subordinated debentures.

Assuming that you join me in approving of this final call on equity investment, it points to the necessity of finalizing the various agreements for Penn-Olin Chemical Company. You will recall that all concerned at our meeting in January (management and counsel of both parents) considered it advisable that these agreements be completed and executed. This is further evidence of the desirability for such action. Please advise me if in your opinion there is anything at my end that can be done to expedite this matter.

If you are in accord with this recommendation, will you pelase forward me on behalf of the Olin Mathieson Chemical Corporation a check in the amount of $124,000 payable to Penn-Olin Chemical Company. I, in turn, will have Pennsalt issue a similar check and, upon receipt of both checks, deposit them in the Penn-Olin Chemical Company account at the First Pennsylvania Banking and Trust Company.

[fol. 1370] When Cecil Williamson, Secretary of Penn-Olin Chemical Company, receives confirmation of these deposits and the agreements have been executed, he will issue to each parent 124 shares of Penn-Olin Chemical Company common stock covering this investment.

Sincerely yours, W. Cooper Willits, Treasurer.

wcw/r
cc to Messrs. Bryce, Williamson.

[fol. 1371] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 315

Olin Mathieson Chemical Corporation

March 21, 1961.

Mr. W. Cooper Willits, Treasurer
Penn-Olin Chemical Company
3 Penn Center
Philadelphia 2, Pennsylvania

Dear Mr. Willits:

Attached is Olin Mathieson Chemical Corporation check for $124,000, in accordance with the fourth paragraph of your letter of March 14th to Mr. Walter F. O'Connell.

Very truly yours, Donald R. Jackson, First Asst. Treas.

Encl.

cc—Mr. Walter F. O'Connell, Mr. C. L. Williamson.

[fol. 1372] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 316

Pennsalt Chemicals Corporation

Three Penn Center, Philadelphia 2, Pennsylvania

March 23, 1961.

Mr. C. L. Williamson, Secretary
Penn-Olin Chemical Company
Mathieson Building
Baltimore 3, Md.

Dear Mr. Williamson:

I am attaching a copy of the deposit slip covering the March 22 deposit to the Penn-Olin account of $248,000. This represents $124,000 from Pennsalt and $124,000 from Olin, against which 124 shares of Penn-Olin stock should be issued to each company in accordance with the regular procedure.

Yours very truly, Edwin E. Tuttle, Controller.

EET:EF
(Encl.)

[fol. 1373] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 317

711-457-2

REC'D C. L. W.

APR -5 1960

PENN-OLIN CHEMICAL COMPANY
% MR. C. L. WILLIAMSON, SECY.
MATHIESON BLDG.,
BALTIMORE 3, MD.

NOTIFY
CHANGE
OF ADDRESS

DUP.

B-194T 11-59

CHECKS	DEPOSITS	DATE	BALANCE
	2,000.00 +	MAR 22 '60	2,000.00 *

% MR. C. L. WILLIAMSON, SECY.
MATHIESON BLDG.,
BALTIMORE 3, MD.

DUP.

NOTIFY
CHANGE
OF ADDRESS

B-134T 11-58

CHECKS	DEPOSITS	DATE	BALANCE
	2,000.00 +	MAR 22 '60	2,000.00 *

PLEASE EXAMINE AT ONCE IF NO ERROR IS REPORTED IN TEN DAYS THE ACCOUNT WILL BE CONSIDERED CORRECT

LAST AMOUNT IN THIS COLUMN IS YOUR BALANCE

THE FIRST PENNSYLVANIA
BANKING AND TRUST COMPANY
PHILADELPHIA 1, PA.

KEY LS—TOTAL OF LIST
SC—SERVICE CHARGE FOR PREVIOUS MONTH'S ACTIVITY (NO ENCLOSURE)

T 33

901

[fol. 1374] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 320

711-457-2

REC'D C. L. W.

DEC - 5 1960

PENN-OLIN CHEMICAL COMPANY
% MR. C. L. WILLIAMSON, SECY.
MATHIESON BLDG.,
BALTIMORE 3, MD.

NOTIFY
CHANGE
OF ADDRESS

DUP.

E-194T 11-58

CHECKS	DEPOSITS	DATE	BALANCE
		NOV 1'60	1,802.09+
	150,000.00+	NOV 17'60	151,802.09+

BALTIMORE 3, MD. OF ADDRESS

DUP.

B-1547 11-58

CHECKS	DEPOSITS	DATE	BALANCE
		NOV 1'60	1,802.09+
	150,000.00+	NOV 17'60	151,802.09+

PLEASE EXAMINE AT ONCE IF NO ERROR IS REPORTED IN TEN DAYS THE ACCOUNT WILL BE CONSIDERED CORRECT

LAST AMOUNT IN THIS COLUMN IS YOUR BALANCE

THE FIRST PENNSYLVANIA
BANKING AND TRUST COMPANY
PHILADELPHIA 1, PA.

KEY LS—TOTAL OF LIST
SC—SERVICE CHARGE FOR PREVIOUS MONTH'S ACTIVITY (NO ENCLOSURE)

T 33

206

Plaintiff's Exhibit 322

711-457-2

REC'D C. L. W.

FEB -6 1961

PENN-OLIN CHEMICAL COMPANY
% MR. C. L. WILLIAMSON, SECY.
MATHIESON BLDG.,
BALTIMORE 3, MD.

NOTIFY
CHANGE
OF ADDRESS

DUP.

8-1947 11-56

CHECKS	DEPOSITS	DATE	BALANCE
		J. 31	20,299.65+
	400,000.00+	J. 31	420,299.65
307,420.85-		11	117,808.79
55,608.42-		J. 30	62,200.37

[fol. 1376] In United States District Court

Plaintiff's Exhibit 323

711-457-2

REC'D C. L. W.
MAR - 3 1961

PENN-OLIN CHEMICAL COMPANY
% MR. C. L. WILLIAMSON, SECY.
MATHIESON BLDG.,
BALTIMORE 3, MD.

NOTIFY
CHANGE
OF ADDRESS

DUP.

B-134T 11-58

CHECKS	DEPOSITS	DATE	BALANCE
		FEB 1'61	62,200.37 *
	200,000.00 +	[illegible]	262,200.37 *
206,315.44 -		FEB 20'61	55,884.93 *

[fol. 1377] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 324

PENN-OLIN C24

711-457-2

REC'D C. L.

APR -5 1961

PENN-OLIN CHEMICAL COMPANY
% MR. C. L. WILLIAMSON, SECY.
MATHIESON BLDG.,
BALTIMORE 3, MD.

NOTIFY
CHANGE
OF ADDRESS
DUP.

CHECKS	DEPOSITS	DATE	BALANCE
			55884.73
752.56-			54932.37
246587.01-	248000.00	22	302932.37
600.66-		23	56343.36
		30	55742.70

[fol. 1378] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 328

Penn-Olin Chemical Company

Statement as of April 11, 1960

Cash Receipts		$2,000.00
Disbursements:		
Stock Certificates, Minute Book and Seal		37.50
Cash Balance April 11, 1960		$1,962.50
Pennsalt Chemicals Corporations—Deferred Expenses:		
Traveling Expenses—J. L. Wood to New York		4.09
A. H. Clem to Baltimore		18.71
W. A. LaLande to Baltimore		15.05
J. McWhirter to Baltimore		20.96
E. E. Tuttle to Baltimore		21.11
W. C. Willits to Baltimore		17.26
K. Earnest—to Phila. & return to Portland		525.86
E. H. Karr—to Phila. & return to Tacoma		506.52
K. Earnest—to Tacoma & return to Portland		44.71
Re: visit to Portland by Olin-Mathieson personnel		37.21
E. H. Karr—to Portland & return to Tacoma		40.59
J. Heitman—to Portland & return to Tacoma		44.62
Engineering Salaries for March 1960		167.14
Expenses A. S. Woodard to Europe 3-2 to 3-25		797.95
		$2,261.78

TPC:EF

4-11-60

[fol. 1379] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 329

Penn Olin Chemical Company Balance Sheet—April 30, 1960

Assets

Current Assets	
Cash	$1,962.50
Deferred Charges	
Organization Expense	37.50
Total	$2,000.00

Liabilities and Shareholders' Investment

Shareholders' Investment	
Capital Stock ($1.00 par)	$ 2.00
Additional paid-in-capital	1,998.00
Total Shareholders' Investment	$2,000.00
Total	$2,000.00

[fol. 1380] Pennsalt Chemicals Corporation

Deferred Expense Account Penn Olin

March Charges		
Expenses A. H. Clem to Baltimore	$ 2.70	
Expenses J. McWhirter to Baltimore	5.90	
Expenses W. C. Willits to Baltimore	5.70	
Expenses E. E. Tuttle to Baltimore	6.05	
Rail Fare A. H. Clem to Baltimore	16.01	
Rail Fare W. A. LaLande to Baltimore	15.05	
Rail Fare J. McWhirter to Baltimore	15.06	
Rail Fare E. E. Tuttle to Baltimore	15.06	
Rail Fare W. C. Willits to Baltimore	11.56	
Rail Fare J. L. Wood to New York	4.09	
Total as of March 31, 1960		$ 97.18
April Charges		
Expenses K. Earnest to Phila. and return to Portland	525.86	
Expenses E. H. Karr to Phila. and return to Tacoma	506.52	
Expenses K. Earnest to Tacoma and return to Portland	44.71	
Expenses K. Earnest re: visit to Portland by Olin Mathieson personnel	37.21	
Expenses E. H. Karr to Portland and return to Tacoma	40.59	
Expenses J. Heitman to Portland and return to Tacoma	44.62	
Expenses A. S. Woodard to Europe 3/2/60 to 3/25/60	797.95	
Expenses A. S. Woodard to Portland, Oregon and Calvert City, Kentucky	91.40	
Professional Services—Barnes, Dechert, Price, Meyers and Rhoads	1800.00	
Air freight and insurance on 10 lb. sample of salt shipped from Calvert City, Kentucky to Krebs & Co. Ltd., Zurich, Switzerland	14.84	
Expenses F. M. Dorley at Calvert City, Kentucky	16.20	
Trucking sample of salt from Calvert City, Kentucky to airfield at Louisville, Kentucky for shipment to Krebs & Co.	3.00	
Emery Air Freight 1 carton rock salt shipped to Societe Electrochemie, France	13.92	
Total for April		3,936.82
Total as of April 30, 1960		$4,034.00

[fol. 1381] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 330

Penn-Olin Chemical Company Balance Sheet

May 31, 1960

Assets	
Current Assets	
Cash	$1,962.50
Deferred Charges	
Organization Expense	37.50
Total	$2,000.00
Liabilities and Shareholders' Investment	
Shareholders' Investment	
Capital Stock ($1.00 par)	2.00
Additional paid-in capital	1,998.00
Total Shareholders' Investment	$2,000.00
Total	$2,000.00

[fol. 1382] Pennsalt Chemicals Corporation

Deferred Expense Account Penn-Olin

March Charges		
Expenses A. H. Clem to Baltimore	2.70	
Expenses J. McWhirter to Baltimore	5.90	
Expenses W. C. Willits to Baltimore	5.70	
Expenses E. E. Tuttle to Baltimore	6.05	
Rail Fare A. H. Clem to Baltimore	16.01	
Rail Fare W. A. LaLande to Baltimore	15.05	
Rail Fare J. McWhirter to Baltimore	15.06	
Rail Fare E. E. Tuttle to Baltimore	15.06	
Rail Fare W. C. Willits to Baltimore	11.56	
Rail Fare J. L. Wood to New York	4.09	
Total as of March 31, 1960		$ 97.18
April Charges		
Air Travel K. Earnest—Tacoma to Phila. and return to Portland	405.35	
Expenses K. Earnest—Tacoma to Phila., Paducah and return to Portland	165.22	
Expenses K. Earnest—at Portland	37.21	
Air Travel E. H. Karr—Tacoma to Phila. and return	366.92	
Expenses E. H. Karr—Tacoma to Phila. and return	139.60	
Expenses E. H. Karr—Tacoma to Portland and return	40.59	

[fol. 1383]

Expenses J. B. Heitman—Tacoma to Portland and return	44.62	
Expenses A. S. Woodard to Europe 3-2-60 to 3-25-60	797.95	
Expenses A. S. Woodard to Portland, Oregon and Calvert City, Ky.	91.40	
Professional Services Barnes, Dechert, Price, Meyers and Rhoads	1,800.00	
Air Freight and Insurance on 10 lb. sample of Salt shipped from Calvert City, Ky. to Krebs & Co. Ltd., Zurich, Switzerland	14.84	
Expenses F. M. Dorley at Calvert City, Ky.	16.20	
Trucking sample of Salt from Calvert City, Ky. to Air Field at Louisville, Ky. for shipment to Krebs & Co.	3.00	
Emery Air Freight 1 carton Rock Salt shipped to Societe Electrochimie, France	13.92	
Total for April		3,936.82
Total as of April 30, 1960		$4,034.00

[fol. 1384] Pennsalt Chemicals Corporation

Deferred Expense Account Penn-Olin

May Charges

Air Travel E. H. Karr—Tacoma to Paris and return	1,548.26	
Expenses E. H. Karr—Tacoma to San Francisco, New York, Paris and Zurich	252.02	
Expenses E. H. Karr—Zurich to France, England and return to Tacoma	266.81	
Expenses J. B. Heitman—Tacoma to Portland and return	53.47	
Telephone & Telegraph Expenses at Tacoma	50.67	
Trucking 1 drum Rock Salt and 1 carboy River Water from Calvert City to Portland, Ore.	15.54	
Preliminary Engineering—Sodium Chlorate Plant:		
Salaries	2,431.74	
Expenses J. L. Marshall—Phila. and Portland and return	65.28	
Expenses R. R. Walden—Phila.—Portland and return	86.00	
Expenses A. S. Woodard—Phila.—Portland and return	110.98	
Expenses K. M. Karnahan—Paducah to Portland and return	138.25	
Expenses L. J. Istas at Portland	16.50	
Photostats—Bernard Aronson	35.36	
Air Travel—A. S. Woodard—Phila. to Portland and return	315.50	

[fol. 1385]

Customs Clearance and forwarding 1 sample parcel Sodium Chlorate from Paris to W. J. Earnest, Portland, Oregon	6.50	
Expenses G. A. Nelson—Wyandotte, Mich. to Phila. and return	89.49	
Boxing Porcelain Funnels for shipment to Portland, Oregon plant	14.58	
Total for May		5,497.04
Total as of May 31, 1960		$9,531.04

TPC:EF
6-28-60

[fol. 1386] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 336

Olin Mathieson Chemical Corporation

Date: February 27, 1961.

Copy to: Mr. J. O. Logan

To: Mr. C. L. Williamson (3) at Baltimore
From: C. V. Mayne at Baltimore
Subject: Penn-Olin

Attached is a schedule which shows the net sales of sodium chlorate and the pre-tax loss thereon for the month of January, 1961. These sales fall into the pre-operating period as referred to in the sales agreement between OMCC and Penn-Olin and, as such, the profit or loss for 1961 is subject to a final accounting at the year end. Depending on circumstances, the final accounting will result in either the total profit or loss as shown on our books being charged to Penn-Olin, or one half the total profit or loss as shown on our books being credited or charged to Pennsalt.

Extra copies of the schedule have been furnished for distribution to appropriate Penn-Olin officers.

C. V. Mayne.

CVM:jlt

Attachments

[fol. 1387] Penn-Olin Chemical Company

Sodium Chlorate Sales and Earnings

January 1961

Particulars	Tons	Per Unit	Amount
Net Sales			
International Paper Co.	210.630		33,832.69
Brunswick Pulp & Paper Co.	58.810		9,586.03
O.M.C.C.-Niagara Falls	52.830		4,548.11
	322.270	148.841	47,966.83
Cost of Sales			
Cost of Purchased Sodium Chlorate	322.270		46,359.72
Hopper Car Rental	—		3,500.00
	322.270	154.714	49,859.72
Expenses			
Administrative, Selling and Advertising @ 6% of Net Sales			2,878.00
Total Cost of Sales and Expenses			52,737.72
Pre-Tax Profit Loss			*4,770.89*

[fol. 1388] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 337

Penn-Olin Chemical Company

Sodium Chlorate Sales and Earnings

January 1961

Particulars	Tons	Per Unit	Amount
Net Sales			
International Paper Co.	210.630		33,832.69
Brunswick Pulp & Paper Co.	58.810		9,586.03
O.M.C.C.-Niagara Falls	52.830		4,548.11
	322.270	148.841	47,966.83
Cost of Sales			
Cost of Purchased Sodium Chlorate	322.270		46,359.72
Hopper Car Rental	—		3,500.00
	322.270	154.714	49,859.72
Expenses			
Administrative, Selling and Advertising @ 6% of Net Sales			2,878.00
Total Cost of Sales and Expenses			52,737.72
Pre-Tax Profit Loss			*4,770.89*

[fol. 1389] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 338

Penn-Olin Chemical Company
Sodium Chlorate Sales and Earnings
February 1961

Particulars	Month Tons	Month Per Unit	Month Amount	To-Date Tons	To-Date Per Unit	To-Date Amount
Net Sales						
International Paper Company	431.860		66,218.69	642.490		100,051.38
Brunswick Pulp & Paper Company	109.280		17,812.64	168.090		27,396.67
OMCC—Niagara Falls	110.870		14,030.95	163.700		18,579.06
West Virginia Pulp & Paper Company	106.400		15,439.58	106.400		15,439.58
St. Marys Kraft Corporation	52.340		8,531.42	52.340		8,531.42
Scott Paper Company	44.100		7,008.30	44.160		7,008.30
	854.850	150.952	129,041.58	1,177.120	150.374	177,008.41
Cost of Sales						
Cost of Purchased Sodium Chlorate	854.850		122,262.32	1,177.120		168,622.04
Hopper Car Rental	—		5,475.00	—		8,975.00
Miscellaneous Costs	—		66.10	—		66.10
	854.850	149.503	127,803.42	1,177.120	150.930	177,663.14
Expenses						
Administrative, Selling and Advertising @ 6% of Net Sales			7,742.00			10,620.00
Total Cost of Sales and Expenses			135,545.42			188,283.14
Pre-Tax Profit Loss			*6,503.84*			*11,274.73*

915

[fol. 1390] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 339

Capital Investment Policy No. 1

Expansion by Construction or Purchase of Facilities

Projects involving expansion of our operations must show a calculated return on total capital of 25% or more and must have a minimum pay-out period of 5½ years.

Explanation

Expansion of Our Operations

This means either increasing the capacity of an existing unit, installing a new unit at a new location, or installing a unit for the production of a product not currently being made by the Company.

Rate of Return

The acceptable rate of return on an expansion project will depend on the nature of the market for the product.

The minimum of 25% will be acceptable for basic or staple products for which forecasts of sales and costs can be made accurately.

The minimum of 25% will also be acceptable for an expansion which is backed up by a firm sales contract. The latter should cover a period which is at least equal to the pay-out period of the project; it should also allow for an escalation in the product's selling price based on the principal items of cost (such as raw materials, utilities, etc.); and finally, it should include a "must take" clause obligating the customer to pay a penalty sufficient to give a 15% return on total investment, if for any reasons (other than force majeure) the customer fails to take the quantities contracted for.

The return must be more than 25% for a product which is subject to seasonal or cyclical variations, used by only one consuming group, or liable to rapid technical obsolescence.

IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 340

Net Return on Shareholders' Equity

Pennsalt vs. Competition

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960
Sales Under $100 Million											
American Potash	9.2%	7.6%	6.1%	7.6%	10.2%	10.7%	10.7%	9.5%	7.6%	8.5%	8.4%
Atlas Chem.	10.2	7.8	7.6	8.9	9.1	11.2	12.1	11.4	7.4	9.5	7.1
Harshaw Chem.	13.7	11.4	5.1	7.1	8.9	11.8	10.6	10.0	7.4	8.4	6.1
Reichhold Chem.	NA	NA	NA	NA	NA	11.6	8.2	12.2	10.8	8.0	NA
Spencer Chem.	20.0	36.3	14.3	12.6	16.0	12.3	13.6	11.6	16.1	10.8	10.4
Wyandotte Chem.	NA	NA	NA	NA	NA	1.5	7.2	9.2	3.9	5.8	7.0
Average	13.3	15.6	8.3	9.1	11.0	9.9	10.4	10.7	8.9	8.5	7.8
Sales Over $100 Million & Under $400 Million											
Air Reduction	13.4	8.2	7.7	7.0	6.4	10.9	13.6	13.3	10.4	11.0	10.6
Diamond Alkali	7.7	14.8	8.4	8.9	8.9	11.6	13.2	8.6	7.8	12.6	11.8
Hercules Powder	18.5	17.4	13.8	13.8	15.8	19.0	15.5	14.2	12.8	12.9	14.4
Hooker Chem.	16.0	29.7	21.5	18.3	21.5	18.0	15.8	13.9	12.1	14.1	12.7
Rohm & Haas	17.9	17.7	11.1	11.6	18.5	21.4	16.7	14.2	11.9	16.4	13.4
Stauffer Chem.	—	—	22.2	22.2	26.1	21.7	17.7	15.9	15.7	13.8	11.7
Average	14.7	17.6	14.1	13.6	16.2	17.1	15.4	13.4	11.8	13.5	12.4
Sales Over $400 Million											
Allied Chem.	13.8	13.0	12.4	13.1	11.4	12.9	11.0	11.4	7.6	10.6	10.4
American Cyanamid	17.5	15.2	11.2	10.3	8.6	11.8	15.0	13.1	10.9	12.4	10.7
Dow Chem.	15.4	15.9	12.3	10.6	10.0	11.8	15.9	12.4	9.9	12.2	14.1
Du Pont	24.4	16.0	14.5	14.2	19.3	21.9	18.5	16.9	13.7	16.0	13.8
Monsanto	17.2	14.4	11.0	11.7	10.0	12.2	10.6	9.6	8.8	11.0	11.3
Olin Mathieson	15.9	11.4	6.8	12.6	15.2	13.0	12.4	9.5	9.5	10.0	8.7
Union Carbide	23.2	17.8	16.0	15.9	13.3	19.9	18.0	15.9	14.5	18.5	16.1
Average	18.2	14.8	12.0	12.6	12.5	14.8	14.5	12.7	10.6	13.0	12.2
Total Competition Average	15.9	15.9	11.9	12.1	13.5	14.0	13.5	12.3	10.4	11.7	11.0
Pennsalt	11.5	9.1	6.7	6.4	6.8	6.8	7.0	5.6	6.5	7.7	8.0

MEH:jew—5/3/61

[fol. 1392] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 349

Olin—Aluminum Division,

Olin Mathieson Chemical Corporation,

400 Park Avenue NYC 22, PLaza 1-7227

February 12, 1958.

Mr. L. M. Shanaman, Sales Manager
Heavy Chemicals Division
Pennsalt of Washington Division
Pennsalt Chemicals Corporation
2901 Taylor Way
Tacoma 2, Washington

Dear Roy:

I definitely owe you an apology and am extremely sorry to have taken so long to reply to your letter of December seventeenth. The bustle of the Christmas season was followed by a rather abrupt transfer to the Aluminum Division where I will be temporarily for the next month or so. In my absence I know that Jimmy Johns or Bill Theobald in Baltimore are carrying on the development of chlorate business and, in fact, I understand you have already received an order from us for our first car.

Although we found that most of the large users were pretty well committed for 1958, we still believe that we can reach the quantity of 500 tons during this coming year.

I enjoyed seeing you in New Orleans and I am only sorry we did not have more time to be together. If I get out to the West Coast, I will contact you but, in the meantime, if you are in the New York area, please let me know. Best regards.

Sincerely, Derek Richardson.

[fol. 1393] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 352

Pennsalt Chemicals, Established 1850

Subject: Sodium Chlorate—Wyandotte Chemicals
Date: March 12, 1959
To: Mr. Wm. P. Drake
From: F. C. Shanaman

I am returning herewith Russ Sloan's memorandum to Dr. LaLande, dated February 25, and a copy of which I had previously received.

You asked for comments and about the only thing I can say, Bill, is that Wyandotte would be a logical one to produce Sodium Chlorate because of their interest in propellents and pulp and paper. They are just as strong in this field as Columbia-Southern, Solvay, etc. You doubtless know that Columbia-Southern is building a Sodium Chlorate plant in Eastern Canada and recently I understand has made arrangements to pick up some Sodium Chlorate from American Potash to feel out the market. I also am informed this week that some of this material Columbia-Southern plans to use for testing out the market in the U.S. and which, if it happens, I presume will make Buck Frances' face very, very red, particularly since he is just getting his own plant started in Mississippi.

F. C. Shanaman

FCS/ep
att.

[fol. 1394] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 358

11/18/59.

Mr. J. G. Johns, Baltimore
J. O. Logan, Baltimore
Pennsalt—Sodium Chlorate

J. G. McMullen
O. J. Theobald
C. W. Frost

I do not know the status of our 1960 sales contracts for chlorate, but just recently discussed our program with Fred Shanaman, of Pennsalt. We have a tentative date the week of November 30th to review our future relationship. In the meantime, I think we should move slowly on a contractual position with customers.

Shanaman feels that if we are going to proceed jointly with a production unit, he could supply up to 5000 tons in 1960. However, if we are not going to proceed jointly, he would suggest a much smaller quantity, namely, around 2000-2500 tons, since their freight equalization cost is rather heavy.

Since in all probability we will not proceed with a joint production facility, we should not over-contract, at least until there is further clarification following my meeting with Shanaman.

J. O. Logan.

[fol. 1395] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 359

Olin Mathieson Chemical Corporation

December 10, 1959.

Mr. J. G. McMullen, Baltimore
JGJ:bd, Baltimore
Sodium Chlorate

C. W. Frost,
J. O. Logan,
R. R. Shively,
O. J. Theobald, Jr.

Confirming our discussions, we will limit our solicitations of third party sodium chlorate sales for Pennsalt to a maximum 2500 ton commitment for the year 1960.

We understand Roy Smart is submitting a contract to Brunswick Pulp and Paper for 1200 tons and that a commitment for 1,000 tons can be obtained from International Paper. This, together with occasional spot shipments to Hollingsworth & Whitney at Mobile and possible occasional spot shipments to Kimberly Clark at Coosa River Newsprint, would account for the tonnage we have available.

By copy of this memo I am asking Mr. Theobald to follow up and determine the status of the International Paper contract and asking Dr. Shively to be certain that the interested field sales offices are properly notified when our commitments have been closed out.

J. G. Johns.

St. Mary's Kraft

[fol. 1396] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 364

Olin Mathieson Chemical Corporation

Date: August 11, 1960.

To: Mr. W. F. O'Connell
From: J. O. Logan
Subject: Penn-Olin

Per discussion today between Pennsalt management, Mr. Osborne, Mr. Block and myself, it was agreed that we will review the technical, legal and financial aspects of the Penn-Olin project with the aim of developing a format of operation which avoids the anti-trust problem and generates maximum return. To this end, you might discuss the situation further with Dick Furland and then contact Mr. Willets of Pennsalt in Philadelphia, who will be reviewing the matter for Pennsalt.

J. O. Logan.

[fol. 1397] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 366

Olin Mathieson Chemical Corporation
CHEMICALS DIVISION
Industrial Chemicals Development Department
Niagara Falls

-1th Laboratory Work with Plaintiff's Titanium Ores.

ER 136 TITLE Economic Evaluation of Titanium Chloride, Oxidation and Pilot Plant Studies of Titanium Tetrachloride

~~PROJECT STATUS MONTHLY DATA FILE~~ OR _____

Laboratory Progress Report

Name	Res. Mgr.	Res. Supv.	Work Rpt. Sy	Report Sy
C. [illegible]				
B. [illegible] (✓)	X		X	X
M. [illegible]				
(A. [illegible])				
G. D. [illegible]				
I. F. [illegible]				
S L. D. [illegible]				
S G. T. [illegible]				
S [illegible] (b) Heinrich				
S H. M. [illegible]				
S W. R. Newburg			X	
S W. L. [illegible]				
S D. A. [illegible]				
S J. L. [illegible]				
S [illegible]				
S-				
S-				
S-				
S-				
S-				
S-				
S-				

Charge No. 550-743-100-4201

Report Dated 12/14/60

Report Type: _____

ER Cross Reference: _____

Cross Reference to Research Report System: U-2.502

4-1

-1 ctr Calcium Chloride - UO3 with Recycle Cases

ER 136 TITLE Economic Re... of Plutonium Titanium Chloride, UO3 ... Pilot Plant ... Test

~~ER 136 - FINAL MONTHLY DATA ITEM~~ OR Semi-Annual Summary Report

Name	Res. Mgr.	Supv.	Work By	Report By
C. ... Hightower				
S. ... Hendrickson (V)	X			
N. ... Parker			X	X
(A. ... Jones)				
G. D. ...				
J. F. ...				
S L. D. ...				
S G. T. ...				
~~S ... Hendrick~~ S) Hendrick				
S. H. ... Miller				
S R. Nuttall		X		
S W.L. ...				
S D.A. Vaughan				
S-				
S-				
S-				
S-				
S-				
S-				
S-				

Charge No. 590-743-100-4201

Report Dated 12/14/60

Report Type: _____

ER Cross Reference: _____

Cross Reference to Research Report System: U-2.502

4-1

Note: remember plant managers must be on the distribution
(J.W. Baker, L.D. Brady, C.F. Coffey, [illegible], W.L. Kiefer, D. Garlock, E.E. Wilcoxon)

Summary

The Oronzio Matheson chlorine cell employing platinized titanium anodes has not yet equalled conventional cells in cost of production. Promising leads in design, operating conditions, and platinum application remain to be explored.

Preliminary cost studies are presented for one and three cell pilot operation. Also a 36 cell

The O.S. Matthieu chlorate cell employing platinized titanium anodes has not yet equalled conventional cells in cost of production. Processing leads in design, operating conditions, and platinum application remain to be explored. Preliminary cost studies are presented for one and three cell pilot operations. Also a 36 cell conventional plant is estimated. Captive use of the chlorate makes each cell attractive.

The economic potential of platinized titanium anodes in a chlorate cell is evaluated on the basis of new information obtained in the laboratory. The platinum consumption rate varies greatly from one sufflier to another. The best results to date show this type of electrode to give a return on investment 24% higher than that obtaining with conventional graphite anode cells in a 40T/day sodium chlorate ($NaClO_3$) plant.

Several alternatives for pilot plants to evaluate this new type cell are considered as is the possibility of using ITE circuit breaker rectifier capacity and floor space in the new Niagara Falls chlorine plant to help provide the chlorate needs of the sodium chlorate plant at Niagara.

925

[fol. 1400]

IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 376

Shipments of Sodium Chlorate By Domestic Commercial Producers During 1960, By Regions
(In Short Tons)

	Pennsalt Chemical Corp.[a]		Hooker Chemical Corp.		American Potash & Chemical Corp.		Total	
	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total	Tons	Total Percent
West of the Rockies								
California, Washington, Oregon, Idaho Nevada, Utah and Arizona	8,625.90	64.0	1,988.55	14.8	2,859.07	21.2	13,473.52	100.0
Montana, Wyoming, Colorado and New Mexico	1,815.70	39.2	719.80	15.5	2,100.30	45.3	4,635.80	100.0
Total West of the Rockies	10,441.60	57.7	2,708.35	15.0	4,959.37	27.4	18,109.32	100.0
East of the Rockies								
Oklahoma, Arkansas, Texas, Louisiana, Mississippi, Alabama, Georgia, Florida, South Carolina, Tennessee, North Carolina, Kentucky, West Virginia, Virginia	4,069.50	8.7	23,263.52	49.6	19,586.24	41.7	46,919.26	100.0
All other States East of the Rockies	684.10	4.0	11,588.04	68.6	4,627.18	27.4	16,899.32	100.0
Total East of the Rockies	4,753.60	7.4	34,851.56	54.6	24,213.42	37.9	63,818.58	100.0
Total	15,195.20	18.5	37,559.91	45.9	29,172.79	35.6	81,927.90	100.0

[a] Including shipments made for Olin Accounts.

Sources: Sodium Chlorate Data Table No. 9.
Stipulation Table No. 1 (General Stipulations Set I, PX 414 and Set II, DX 48).

927

[fol. 1401] Indexes for Sodium Chlorate and Industrial Chemicals Production

1957 = 100

Year	Production Index For Industrial Chemicals	Production Index For Sodium Chlorate	Production In Short Tons
1961			105,000 [b]
1960	127	154	91,184 [a]
1959	118	149	88,309
1958	98	114	67,249
1957	100	100	59,142
1956	95	93	55,068
1955	89	79	46,972
1954	73	68	39,952
1953	73	73	43,221
1952	64	68	40,434
1951	62	56	33,341
1950	52	37	22,085

[a] Preliminary, subject to revision.

[b] Estimated by Chemical and Engineering News, September 4, 1961, p. 119.

Source: Production Index For Industrial Chemicals is from Business Statistics 1961 Edition, U. S. Department of Commerce. Production data is from Bureau of the Census, U. S. Department of Commerce.

[fol. 1402] In United States District Court

Plaintiff's Exhibit 377

Personnel

* * * * * * *

Interrogatory No. 1

Olin Mathieson Chemical Corp. Answer

1. State the name, position and business address of each person who is an officer, director or supervisory employee of Penn-Olin Chemical Company. For each such person, state all positions (a) currently held and (b) held within the past five years as officer, director or employee of Olin Mathieson Chemical Corporation or Pennsalt Chemicals Corporation, and describe the duties of each.

1. The name, position and business address of each officer and director of Penn-Olin Chemical Company are as follows:

James McWhirter, President and Director
W. Alfred LaLande, Jr., Director
Albert H. Clem, Director
W. Cooper Willits, Treasurer and Director
Pennsalt Chemicals Corporation
Three Penn Center Plaza
Philadelphia 2, Pennsylvania
Albert E. Clement, Director
Pennsalt Chemicals Corporation
Calvert City, Kentucky
J. O. Logan, Vice President and Director
C. L. Williamson, Secretary and Director
J. G. Johns, Director
J. L. Wood, Director
Olin Mathieson Chemical Corporation
10 Light Street
Baltimore 3, Maryland
Russell Hopkinson, Director
Olin Mathieson Chemical Corporation
460 Park Avenue
New York 22, New York

[fol. 1403] The positions as an officer, director or employee of Olin Mathieson held currently and within the past five years by any of the foregoing and the duties of such persons in such positions are as follows:

J. O. Logan:

January, 1956—June, 1958. General Manager, Industrial Chemicals Division. Responsible for the operations of the Division, reporting to the corporate Vice President in charge.

June, 1958—September, 1959. Vice President and Director of Marketing, Chemicals Division. Responsible to the Senior Vice President and General Manager of the Chemicals Division (the consolidation of the former Agricultural, Blockson, Organic, and Industrial Chemicals Divisions) for marketing efforts and policies connected therewith.

October, 1959—January, 1961. Vice President and Associate General Manager, Chemicals Division. Responsible, [fol. 1404] under the Senior Vice President in charge of the Division, for all facets of the operations of the Division.

January, 1961 to date. Vice President and General Manager of the Chemicals Division. Responsible for all facets of the operations of the Division.

C. L. Williamson:

January, 1956—July, 1956. Budget Manager, Industrial Chemicals Division. Responsible for the coordination, format, and assembly of the various budgets of the Division.

August, 1956—June, 1957. Manager, Administrative Services, Industrial Chemicals Division. Responsible for administrative supervision of all staff services of the Division.

July, 1958—October, 1960. Assistant to the Vice President and General Manager, Industrial Chemicals (and Chemicals) Division. Responsible for tasks as assigned, [fol. 1405] primarily of an administrative nature pertaining to detailed matters not covered by any of the major line functions.

November, 1960 to date. Manager, Special Projects, Chemicals Division. Responsible for investigations and evaluations as well as certain coordinating efforts as designed or assigned by the General Manager of the Division.

J. G. Johns:

January, 1956—December, 1957. Assistant District Manager and District Sales Manager, Philadelphia, Industrial Chemicals Division. Responsible for sales of industrial chemical products in the Philadelphia geographical territory and supervision of salesmen and sales staff attached to the Philadelphia District Office.

January, 1958—September, 1958. Assistant Manager, Field Sales-Industrial Chemicals Division. Assisting Field [fol. 1406] Sales Manager in directing the activities of the Industrial Chemicals Field Sales Force.

October, 1958—September, 1959. New York District Sales Manager, (Industrial) Chemicals Division. Respon-

sible for sales of industrial chemical products in the New York geographical territory and supervision of salesmen and sales staff attached to the New York District Office.

October, 1959 to date. General Sales Manager, Heavy Chemicals (Industrial) Chemicals Division. Responsible to the Associate General Manager and General Manager of Chemicals Division for the sales volume and sales policy of heavy industrial chemicals produced and marketed by the Chemicals Division.

J. L. Wood:

January, 1956—December, 1957. Operations Manager, McIntosh, Alabama, plant. Plant Manager of alkali chlorine plant with facilities to produce some by-products.

[fol. 1407] January, 1958 to date. Electrochemical Engineer, Chemicals Division. Design, location and construction for new plants in the electrochemical field, and responsibilities as to operating problems in the electrochemical plants and to problems in barging of products.

Russell Hopkinson:

January, 1956—January, 1957. Vice President for Development. Evaluation and acquisition of new products, processes and commercial activities.

January, 1957—June, 1958. Executive Vice President. Responsible for all activities of Hydrocarbon Chemicals Division.

June, 1958—August, 1960. Vice President, Commercial Development. Assisting divisions in developing new products, processes and raw materials sources.

September, 1960 to date. Vice President, Senior Advisor. Consulting and advising President and Staff relating to operations.

[fol. 1408] Interrogatory No. 5

Olin Mathieson Chemical Corp. Answer

5. State the name, position and business address of each officer, director, employee and agent of Olin Mathieson who participated in the negotiations with Pennsalt concerning the joint venture, and describe their activities.

5. The names, positions and business addresses of Olin Mathieson personnel who participated in the negotiations with Pennsalt are as follows:

S. de J. Osborne, President
W. F. O'Connell, Vice President, Finance
Olin Mathieson Chemical Corporation
460 Park Avenue
New York 22, New York
Edward Block, Senior Vice President and General Manager, Chemicals Division
J. O. Logan, Vice President and Associate General Manager, Chemicals Division
J. L. Wood, Electrochemical Engineer, Chemicals Division
J. G. Johns, General Sales Manager, Heavy Chemicals, (Industrial) Chemicals Division
C. L. Williamson, Assistant to the Vice President and Associate General Manager, Chemicals Division
Olin Mathieson Chemicals Corporation
10 Light Street
Baltimore 3, Maryland

Mr. Osborne was responsible for the final decision to proceed with the project. Mr. O'Connell participated only to the extent of obtaining financing for Penn-Olin. Mr. Block was the person in Olin Mathieson primarily responsible for the progress of the negotiations and for determining the [fol. 1409] relative merits of the undertaking. Mr. Logan assisted Mr. Block and, after Mr. Block's death in January, 1961, assumed his responsibilities. Mr. Wood was responsible for technical evaluations and Mr. Johns for sales evaluations. Mr. Williamson acted as coordinator.

[fol. 1410] **Interrogatory No. 66**

Olin Mathieson Chemical Corp. Answer

Int. 66. Describe with particularity the duties and responsibilities of each of the Olin officers or employees listed in column A as they relate to the production and the pricing, advertising, selling and other marketing functions performed by the Olin organization in relation to each of the chemicals listed in column B:

A	B
John O. Logan	sodium chlorate
C. L. Williamson	calcium hypochlorite
J. G. Johns	hydrofluoric acid
J. L. Wood	chlorine
Russell Hopkinson	caustic soda
	ammonia

Ans. 66. John O. Logan, as Vice President and General Manager of the Chemicals Division, has ultimate responsibility for the production and marketing of each of the chemicals listed in column B. C. L. Williamson, as Assistant to the Vice President and General Manager of the Chemicals Division, has no direct responsibilities relating to any of the chemicals listed in column B. J. G. Johns, as Director of Marketing, Industrial Chemicals, Chemicals Division, has supervisory responsibility for the pricing, advertising, selling and other marketing functions in connection with sodium chlorate, chlorine, caustic soda, calcium hypochlorite and ammonia. J. L. Wood has no direct duties or responsibilities in any of the areas listed in any of the chemicals listed, except that he does from time to time advise on problems concerning the production of chlorine and caustic soda. Russell Hopkinson, who is Vice President, Senior Adviser, of the Corporation and a member of the Capital Appropria-[fol. 1411] tions Request Committee, does not have any responsibilities or duties in connection with the chemicals listed in column B, except that he is a member of the Board of Directors of Penn-Olin Chemical Company.

(Page 2 of Interrogatory Ans. 66.)

[fol. 1412] Interrogatory No. 1

Pennsalt Chemicals Corporation Answer

1. State the name, position and business address of each person who is an officer, director or supervisory employee of Penn-Olin Chemical Company. For each such person, state all positions (a) currently held and (b) held within the past five years as officer, director or employee of Pennsalt Chemicals Corporation or Olin Mathieson Chemical Corporation, and describe the duties of each.

1. *James McWhirter,* Three Penn Center, Philadelphia 2, Pennsylvania, President and Director of Penn-Olin Chemical Company.

(a) General Manager of Industrial Chemicals Division East, Pennsalt Chemicals Corporation. Duties: Responsible for Industrial Chemicals Division East.

(b) Formerly Manager of Manufacturing, Industrial Chemicals Division East and Director of Personnel of Pennsalt.

W. Cooper Willits, Three Penn Center, Philadelphia 2, Pennsylvania, Treasurer and Director of Penn-Olin.

(a) Treasurer of Pennsalt. Duties: Responsible for Financial Division and recommends financial policy to President of Pennsalt.

(b) Formerly Assistant to the President of Pennsalt.

Albert H. Clem, Three Penn Center, Philadelphia 2, Pennsylvania, Director of Penn-Olin.

[fol. 1413] (a) Vice President, Marketing of Pennsalt. Duties: Responsible for marketing policies.

(b) Formerly General Manager, Chemical Specialties Division of Pennsalt.

W. A. LaLande, Jr., Three Penn Center, Philadelphia 2, Pennsylvania, Director of Penn-Olin.

(a) Vice President and Technical Director of Pennsalt. Duties: Responsible for research, patents, product development and Central Engineering Department.

(b) No former position.

Albert E. Clement, Calvert City, Kentucky, Director of Penn-Olin.

(a) Area Manager, Calvert City Plant, of Pennsalt. Duties: Responsible for operations at Calvert City plant.

(b) No former position.

The position and duties of *J. G. Johns, John O. Logan, Cecil L. Williamson, J. L. Wood* and *Russell Hopkinson* will be answered by Olin Mathieson Chemical Corporation.

[fol. 1414] Interrogatory No. 5

Pennsalt Chemicals Corporation Answer

5. State the name, position and business address of each officer, director, employee and agent of Pennsalt who participated in the negotiations with Olin Mathieson concerning the joint venture, and describe their activities.

5. *William P. Drake,* President, Three Penn Center, Philadelphia, Pennsylvania. Activities: over-all planning of the joint venture.

Albert H. Clem, Vice President, Marketing, Three Penn Center, Philadelphia, Pennsylvania. Activities: marketing aspects of the joint venture.

W. Cooper Willits, Treasurer, Three Penn Center, Philadelphia, Pennsylvania. Activities: financial aspects of the joint venture.

James McWhirter, General Manager of Industrial Chemicals Division East, Three Penn Center, Philadelphia, Pennsylvania. Activities: production and operation aspects of the joint venture.

[fol. 1415] Interrogatory No. 47

Pennsalt Chemicals Corporation Answer

Int. 47. Describe with particularity the duties and responsibilities of each of the Pennsalt officers or employees listed in column A as they relate to the production and the pricing, advertising, selling and other marketing functions performed by the Pennsalt organization in relation to each of the chemicals listed in column B:

A	B
James McWhirter	sodium chlorate calcium hypochlorite
Albert H. Clem	hydrofluoric acid
W. Cooper Willits	chlorine
W. A. LaLande, Jr.	caustic soda
Albert E. Clement	ammonia

Ans. 47. *James McWhirter* is Corporate Vice President and General Manager of the Industrial Chemicals Division East. Mr. McWhirter has over-all responsibility for (a) marketing any sodium chlorate made available to the Industrial Chemicals Division East; (b) production of calcium hypochlorite; and (c) production, pricing, selling and marketing hydrofluoric acid, chlorine, caustic soda and ammonia.

Albert H. Clem is Vice President of Marketing. He is responsible for the marketing policy relating to the six chemicals listed.

W. Cooper Willits is Treasurer. He has none of the enumerated responsibilities.

W. A. LaLande, Jr. is Vice President-Technical Director. He has none of the enumerated responsibilities.

Albert E. Clement is Area Manager, Southern Plants, Industrial Chemicals Division East. He is responsible for production of hydrofluoric acid and for chlorine and caustic soda produced at Calvert City, Kentucky.

[fol. 1416] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 378

Interrogatory No. 8

Olin Mathieson Chemical Corp. Answer

Int. 8. State the name and business address of (a) each current licensee under Olin Mathieson's process for generating chlorine dioxide, and (b) each person or company that held or applied for such a license within the past five years, indicating the date and term of each license granted and the date of each unsuccessful application.

Ans. 8. Set forth below is the name and address of each domestic plant which is currently using the Olin Mathieson process for the generation of chlorine dioxide from sodium chlorate. Organizations or plants marked with a "(X)" are those which Olin Mathieson believes have installed the process within the past five years. Olin Mathieson believes that this list is complete, although it is possible that other organizations or other plants of the same organizations may be using the process, or that an organization on this list is no longer using it.

American Can Co. (X)
Marathon Division
Naheola, Ala.

Bowaters Carolina (X)
Catawba, S. C.

Brunswick Pulp & Paper (X)
Brunswick, Ga.

Buckeye Cellulose Corp.
Foley, Fla.

Champion Paper & Fiber
Canton, N. C.

Champion Paper & Fiber
Pasadena, Texas

Container Corp. of America (X)
Brewton, Ala.

Continental Can Corp. (X)
Robert Gair Div.
S. Augusta, Ga.

Coosa River Newsprint Co.
Coosa Pines, Ala.

Crossett Paper Mills
Crossett, Ark.

Crown Zellerbach Corp. (X)
Camas, Washington

Crown Zellerback Corp. (X)
Gaylord Container Div.
Bogalusa, La.

East Texas Pulp & Paper Co.
Evadale, Texas

[fol. 1417]

Gulf States Paper Corp. (X)
Demopolis, Ala.
International Paper Co.
Bastrop, La.
International Paper Co. (X)
Georgetown, S. C.
International Paper Co.
Mobile, Ala.
International Paper Co.
Moss Point, Miss.
International Paper Co.
Natchez, Miss.
International Paper Co.
Spring Hill, La.
Rayonier, Inc.
Hoquiam, Wash.
Rayonier, Inc.
Port Angeles, Wash.
Scott Paper Co. (X)
H. & W. Division
Mobile, Ala.
St. Regis Paper Co. (X)
Pensacola, Fla.
Waldorf Paper Products (X)
Missoula, Mont.
West Va. Pulp & Paper
Covington, Va.
West Va. Pulp & Paper (X)
Luke, Md.
Weyerhaeuser Timber Co. (X)
Longview, Wash.
Weyerhaeuser Timber Co. (X)
Everett, Wash.

During the past five years, Olin Mathieson has not entered into any formal license arrangement with any domestic person or organization with respect to Olin Mathieson's process for generating chlorine dioxide from sodium chlorate, nor has Olin Mathieson turned down any application for such license. It has been Olin Mathieson's policy to make the process available on a royalty-free basis to any plant desiring to use it. If an inquiry as to the process is received, the person or organization inquiring is referred to equipment manufacturers who are able to construct the necessary apparatus. In addition, engineering personnel of Olin Mathieson may be called upon to assist in determining whether or not the process would be appropriate for the particular plant concerned and to assist with the engineering and installation of the apparatus.

(Page 2 of Interrogatory No. 8 Answer)

[fol. 1418] Interrogatory No. 52

Olin Mathieson Chemical Corp. Answer

Int. 52. State (a) the name and business address of each owner or licensor of a chlorine dioxide generation process competitive with Olin's and (b) the name, business address and chlorine dioxide plant location of each company which, to Olin's knowledge, information or belief, currently uses any such competitive process.

Ans. 52. (a) The name and business address of each domestic owner or licensor of a chlorine dioxide generation process other than Olin (and the name of such other process) are as follows:

Owner (and Licensor)	Process
Allied Chemical Corporation 61 Broadway New York 6, N. Y.	Solvay
Brown Paper Company Berlin, New Hampshire	Day-Kesting
Hooker Chemical Corporation 1200 47th Street Niagara Falls, N. Y.	Rapson R-2

(b) The name, business address and chlorine dioxide plant location of each domestic company which uses those competitive processes (and the name of the process used) are as follows:

Company	Plant Location	Process
Brown Paper Company Berlin, N. H.	Berlin, N. H.	Day Kesting
Glatfelter Company, P. H. Spring Grove, Pa.	Spring Grove, Pa.	Solvay
Hudson Pulp & Paper Company New York, N. Y.	Palatka, Fla.	Solvay
International Paper Company New York, N. Y.	Pine Bluff, Ark., Spring Hill, La. Ticonderoga, N. Y.	Solvay Rapson R-2 Solvay
Mead Corporation, The Dayton, Ohio	Chillicothe, Ohio	Solvay
Nekoosa-Edwards Paper Co. Port Edwards, Wisc.	Nekoosa, Wisc.	Solvay

[fol. 1419]

Oxford Paper Company New York, N. Y.	Rumford, Maine	Solvay
Packaging Corp. of America Grand Rapids, Mich.	Filer City, Mich.	Solvay
Penobscot Chemical Fibre Co. Great Works, Maine	Great Works, Maine	Solvay

Company	Plant Location	Process
Potlatch Forest, Inc. Lewiston, Idaho	Potlatch, Idaho	Solvay
Puget Sound Pulp & Paper Co. Bellingham, Wash.	Bellingham, Wash.	Solvay
Rayonier, Inc., New York, N. Y.	Fernandina Beach, Fla.	Solvay
	Jesup, Ga.	Solvay
Riegel Paper Corporation New York, N. Y.	Acme, N. C.	Solvay
St. Marys Kraft Company New York, N. Y.	St. Marys, Ga.	Solvay
St. Regis Paper Company New York, N. Y.	Pensacola, Fla.	Rapson R-2
Standard Packaging Corp. (Eastern Fine Paper and Pulp Div.) New York, N. Y.	Lincoln, Mo.	Solvay
Union Bag-Camp Corporation Franklin, Va.	Franklin, Va.	Rapson R-2
West Va. Pulp & Paper Co. New York, N. Y.	Tyrone, Pa.	Solvay

[fol. 1420] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 379

Interrogatory No. 16

Pennsalt Chemicals Corporation and Penn-Olin Chemical Company Answers

16. State the respects in which the allegations of the third sentence of paragraph 14 of the complaint are "denied as stated." Indicate the respects in which allegations therein are admitted, admitted in part, denied or not presently known.

16. (Pennsalt) As stated in its answer to the complaint, Pennsalt a) admits that the raw materials for Penn-Olin's production are found in large part outside Kentucky; b) denies as stated the allegation as to Penn-Olin's "chemical products" because it is intended that Penn-Olin will only produce one chemical product, sodium chlorate, and c) admits that Penn-Olin's production of sodium chlorate is destined for sale to customers located principally in the Southeastern United States.

16. (Penn-Olin) As stated in its answer to the complaint, Penn-Olin a) admits that the raw materials for its production are found in large part outside Kentucky; b) denies as

stated the allegation as to its "chemical products" because it only intends to produce one chemical product, sodium chlorate, and c) admits that its production of sodium chlorate is destined for sale to customers located principally in the Southeastern United States.

[fol. 1421] Interrogatory No. 45

Pennsalt Chemicals Corporation Answer

Int. 45. Describe the respects, if any, in which Penn-Olin is treated by Pennsalt in a manner different than subsidiaries or other subsidiaries of Pennsalt, for accounting, tax, corporate organization and other purposes.

Ans. 45. Penn-Olin is treated differently from other Pennsalt subsidiaries for accounting and tax purposes as occasioned by the fact that Penn-Olin is 50% owned by Pennsalt. Wholly owned domestic manufacturing subsidiaries of Pennsalt are consolidated in the preparation of financial statements, so that Pennsalt's investment in such companies is eliminated, and the assets, liabilities and earnings of the subsidiary companies are combined with those of Pennsalt. In the case of Penn-Olin, as would be the case with any subsidiary where only a 50% ownership exists, the investment is shown in the consolidated statements as an asset, with the underlying equity noted in the Notes to Financial Statements.

[fol. 1422] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 382

Interrogatory No. 82

Pennsalt Chemicals Corporation Answer

82. State (a) the sodium chlorate productive capacity of Pennsalt's Portland, Oregon plant as of the date that plant commenced operations, and (b) the amount and date of each change therein to the present time.

Ans. 82.

October 1941 (original plant)	2,194 tons per year
October 1942	3,448 "
January 1943	4,248 "
December 1949	5,448 "
February 1954	7,848 "
October 1957	12,392 "
October 1959	15,392 "

[fol. 1423] IN UNITED STATES DISTRICT COURT.

PLAINTIFF'S EXHIBIT 385

Pennsalt's Sales in the Southeast

Pennsalt Interrogatory 84

[fol. 1424] Interrogatory No. 84

Pennsalt Chemicals Corporation Answer

84. State for the years 1959 and 1960 the total dollar sales in the sixteen southeastern states area design--ed in defendant's answer to Plaintiff's Interrogatory 12 (Set II).

a. of chlorine, caustic soda, calcium hypochlorite, hydrofluoric acid and ammonia, individually.

b. of all Pennsalt products, considered collectively, sold in those states.

84. See Exhibit A.

[fol. 1425]

Sales in Southeastern States

Exhibit A

Year 1959	Chlorine	Caustic Soda	Calcium Hypochlorite	Hydrofluoric Acid	Anhydrous Ammonia	Aqueous Ammonia	All Products Combined
Texas	—	17,793		27,228	—	—	4,112,104
Louisiana		83,614		—	—	—	1,196,739
Kentucky	2,284,962	172,705		1,290,937	492,930	—	6,665,422
Florida	—	13,628		49,480	18,647	—	1,019,535
Georgia	—	21,880	Not	2,219	—	—	874,143
North Carolina	6,820	74,509	Available	61,190	—	3,851	996,926
South Carolina	298	437,988		2,905	—	—	1,094,662
Virginia	3,112	25,375		—	18,083	—	938,395
West Virginia	35,273	15,816		15,404	57,182	—	2,820,932
Alabama	20,880	109,953		701	—	—	889,507
Mississippi	17,802	—		—	—	—	268,868
Arkansas	—	—		—	—	—	121,923
Kansas	—	837		36,960	—	—	328,843
Missouri	90,776	442,537		668,614	—	—	2,820,336
Tennessee	—	92,636		13,030	—	—	1,047,144
Oklahoma	—	—		131,186	13,948	—	635,904

[fol. 1426]

Texas	—	(501)	203,740	21,863	—	—	3,594,854
Louisiana	—	(957)	58,638	1,026	—	—	1,138,053
Kentucky	2,987,475	133,476	26,901	1,624,650	459,380	—	6,602,750
Florida	—	11,023	83,825	53,739	—	—	1,108,691
Georgia	—	96,874	44,155	—	—	—	1,268,933
North Carolina	20,157	29,935	63,037	49,985	—	1,536	866,694
South Carolina	121	428,509	7,436		—	—	1,134,751
Virginia	7,961	102,898	61,802	428	7,613	—	910,039
West Virginia	11,948	17,600	7,066	—	51,459	—	2,878,620
Alabama	—	63,107	31,635	685	—	—	1,233,278
Mississippi	6,463	1,516	27,657	—	—	—	518,912
Arkansas	—	18,355	7,129	—	—	—	299,158
Kansas	—	497	7,419	47,248	—	—	386,266
Missouri	59,735	201,925	64,962	130,621	—	—	1,851,313
Tennessee	—	183,173	74,519	21,536	—	—	1,102,913
Oklahoma	—	—	38,806	99,793	28,855	—	685,784

[fol. 1427] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 386

Interrogatory No. 76

Olin Mathieson Chemical Corp. Answer

Int. 76. State the name and address of each salesman who first contacted each of the following companies to solicit or otherwise discuss the sales of sodium chlorate listed on (a) the document labelled "Penn-Olin C 55" and entitled "Penn-Olin Chemical Company Sodium Chlorate Sales and Earnings, January 1961" and (b) the document labelled "Penn-Olin C 56" entitled "Penn-Olin Chemical Company Sales and Earnings, February 1961", and give the date of each such solicitation or discussion:

(i) International Paper Co.
(ii) Brunswick Pulp & Paper Co.
(iii) West Virginia Pulp & Paper Co.
(iv) St. Mary's Kraft Corp.
(v) Scott Paper Co.

Ans. 76. The sales of sodium chlorate reflected on documents labeled "Penn-Olin C 55" and "Penn-Olin C 56" (a) were effected on the dates indicated (b) as the result of solicitations made by the salesmen named:

International Paper Co.

(a) December 27, 1960
(b) D. W. Drummond, J. G. Johns, H. P. Smith, G. H. Nusloch, J. M. Naughton and W. A. Stone

Brunswick Pulp & Paper Co.

(a) December 15, 1960
(b) D. W. Drummond, J. F. Carey, J. O. Logan and E. T. Hanna

West Virginia Pulp & Paper Co.

(a) December 22, 1960
(b) H. P. Smith, E. H. Millard, R. L. Moser and A. M. Faires

[fol. 1428] St. Marys Kraft Co.

(a) November 3, 1960
(b) H. P. Smith

Scott Paper Co.

(a) November 30, 1960
(b) E. H. Millard, J. U. Walker, G. H. Nusloch and W. A. Stone

(Page 2 of Interrogatory Ans. 76)

[fol. 1429] In United States District Court

Plaintiff's Exhibit 387

Sodium Chlorate Purchased from Pennsalt and Consumed by Olin

Olin Interrogatory 13

[fol. 1430] Interrogatory No. 13

Olin Mathieson Chemical Corp. Answer

13. With respect to defendant's answer to paragraph 11 of the complaint that "substantially all of the sodium chlorate it has purchased from Pennsalt" has been resold, state the extent to which such sodium chlorate has not been resold since 1958 and indicate the use or uses to which such difference has been put.

13. The only sodium chlorate purchased from Pennsalt by Olin Mathieson since 1958 and not resold by Olin Mathieson was used by Olin Mathieson as a raw material in the production of a cotton defoliant, chemically magnesium chlorate. None was used for the purpose in 1958, but in 1959 94,000 pounds and in 1960 50,000 pounds were so used.

[fol. 1431] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 389

Interrogatory No. 80

Olin Mathieson Chemical Corp. Answer

Int. 80. State whether since January 1, 1956 Olin has embarked on any new capital investment venture in which Olin had not theretofore engaged in "process development up through semi-commercial operations." See Logan Deposition, June 1, 1961, page 175. Describe briefly the nature of each project, the products involved and the amount of investment made.

Ans. 80. Since January 1, 1956, Olin has embarked on the following new capital investment projects in inorganic chemicals in which Olin had not theretofore engaged in "process development up through semi-commercial operations":

(1) Omset: this is a product used in making textile materials wrinkle free during washing. $118,302 was invested, but the project has been abandoned.

(2) Chlorocyanurates: this project is to produce several chlorocyanurates for use in water purification and other uses to be developed. It is still in the engineering stage and is estimated to require an investment of $2,000,000.00.

[fol. 1432] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 391

Interrogatory No. 27

Pennsalt Chemicals Corporation Answer

Int. 27. State the name and address of each of your company's principal competitors in calcium hypochlorite and hydrofluoric acid.

Ans. 27. Hydrofluoric Acid

Allied Chemicals Corporation, 40 Rector Street, New York; Stauffer Chemical Company, 380 Madison Avenue, New York; Olin Mathieson Chemical Corporation, 460 Park Avenue, New York; Harshaw Chemical Company, 1945 East 97th Street, Cleveland, Ohio.

Calcium Hypochlorite

Olin Mathieson Chemical Corporation, 460 Park Avenue, New York; Pittsburgh Plate Glass Company, 1 Gateway Center, Pittsburgh, Pennsylvania.

[fol. 1433] IN UNITED STATES DISTRICT COURT

Washington, D. C.

EXCERPTS FROM DEPOSITION OF WILLIAM P. DRAKE TAKEN ON AUGUST 1, 1961

* * * * * * *

[fol. 1434] WILLIAM P. DRAKE was called for examination for the plaintiff The United States of America and, having been first duly sworn by the Notary, was examined and testified as follows:

EXAMINATION ON BEHALF OF THE PLAINTIFF THE UNITED STATES OF AMERICA

By Mr. Freed:

Q. Would you state your name and address for the record, please?

A. William P. Drake, home address, Buttonwood Road, B-u-t-t-o-n-w-o-o-d, Berwyn, B-e-r-w-y-n, Pennsylvania.

Q. Mr. Drake, how long have you been President of Pennsalt Chemicals Corporation?

A. Since July 1st, 1955.

Q. How long before then does your service with Pennsalt, Pennsylvania Salt Manufacturing Company go back?

A. To April 9th, 1934.

Q. Could you give us a brief sketch of the various responsibilities or positions that you held prior to the Presidency?

A. I started in as a student trainee working in the plants and other sections of the Company, and in about 1937 I was assigned to the Sales Department to introduce a new product which fortunately was successful and resulted in the creation of a new department, which was known then as the Pennsalt Cleaners Department. Subsequent to that the [fol. 1435] Department was enlarged to form what was then known as the Chemical Specialties department, and I

was head of that until about 1948 when I was made Assistant Vice President. In 1949, when the then Vice President in charge of sales—we then having the organization pattern of President, Vice President, Sales Vice President, Manufacturing, Finance—that Vice President of Sales was made President in '49 at which time I became Vice President in charge of sales. In 1954 the Company changed its organizational pattern into divisions, operating divisions; for a very brief period I was General Manager of the Chemical Specialties Division, then, due to necessity of making some rather prompt changes in organization, I then became General Manager of the Industrial Chemicals Division, or I was going to say for a few minutes. In 1955 in February I was made Executive Vice President and in July President.

Q. Mr. Drake, at the time the government filed the present litigation, a press release was issued over the name of your Company which stated in part, "For many years the firm said joint ventures similar to Penn-Olin have been a standard and accepted method of developing new products, new markets, and increasing competition."

I wonder if you could tell us, with reference to the statement and to the thinking that lay behind it, what new [fol. 1436] products, new markets and increased competition were developed or furthered by the creation of Penn-Olin Chemical Company?

A. Repeat the last part of that question, if you will, please, where you start, "I wonder if you would tell me . . ."

(The reporter read the question.)

A. First of all, of course there is no new product introduced. As far as the new market was concerned in terms of Pennsalt, as you already know, I am sure, we had done very little in the southeastern area and in the marketing of chlorate for very obvious reasons. The competition that it created was the introduction of a new producer in the southeastern area.

Q. Would you state, sir, what the very obvious reasons were that had led Pennsalt to do very little in the southeast with chlorates?

A. Yes, indeed. We, as you know, have been producing chlorates in the northwest for some time in a plant where, during most of the time, the demand for the output of that plant was sufficiently great to take up virtually all, if not all, of the production. When that is true, as it was, the natural thing is for you to continue to sell within the area where you don't have the freight absorption that you would have in an area much further away, as was the case in the southeast. So that was, I think, the particular reason for [fol. 1437] our staying in the northwest with our chlorate sales. It was more profitable to do so.

* * * * * * *

[fol. 1438] By Mr. Freed:

Q. Mr. Drake, with reference to your testimony concerning the "increase in competition" portion of the press release, I believe you stated that Penn-Olin did introduce a new producer into this area. Is it not a fact, however, sir, that both Olin and Pennsalt had been engaged in selling sodium chlorate in substantial quantities in the southeastern United States, at least since 1958?

A. First I would answer that by saying I do not feel that Pennsalt had sold chlorates in the southeast in substantial quantities. To my knowledge that would not be, we wouldn't consider it substantial. The extent to which Olin Mathieson sold is unknown to me, frankly. I don't know what their volume of sales was during that period.

Q. Turning back then, if we might, to the commencement of Pennsalt's interest in sodium chlorate, I wonder if you [fol. 1439] can tell us what the scope of Pennsalt's business in sodium chlorate on the west coast was from the time it commenced it in 1941 until the time that you and Mr. Logan first began to talk about chlorine dioxide?

A. If I understand what you mean by "the scope", and please correct me if I don't, our initial interest in the northwest, as I have had it passed on to me, was two-fold; one, the possibility—well, first, the agricultural field of which, incidentally, our then head of the Pennsalt Washington Division, Mr. Shanaman, was very keenly interested, and I would imagine that that triggered our interest more than anything else in chlorates at the time. Then there was also

the anticipated growth of the need for a superior bleaching operation for the pulp paper industry. We have been suppliers to the pulp and paper industry in the northwest for some years, had been prior to 1941. I think that is the best answer I can give you as to the scope of our interest at that time, if I understand your question correctly.

Q. When you referred to Pennsalt's role as a supplier to the pulp and paper industry in the northwest, are you referring to the sale of chemicals other than sodium chlorate in substantial quantities to these companies?

A. Yes, yes. I'm speaking largely of chlorine and caustic soda.

[fol. 1440] Q. Does the Pennsalt western operation today continue to have pulp and paper companies among its leading customers?

A. Yes.

Q. Could you give us any approximation of the proportion of your western business that goes to pulp and paper companies?

Mr. DeLone: You mean western sodium chlorate business or all business?

Mr. Freed: All Pennsalt west.

The Witness: To answer that accurately or clearly I would have to differentiate between the two divisions which we have in the northwest; one is industrial chemicals which we call Industrial Chemicals West, and the agricultural chemicals. Of the Industrial Chemicals West, a very substantial part of our business is with the pulp and paper industry.

By Mr. Freed:

Q. Out of the approximately $90 million sales that your Company had in the past year, what portion is represented by Pennsalt in the west?

A. This is a rough figure, I would say approximately 20 per cent. That's a best guesstimate.

* * * * * * * *

[fol. 1441] By Mr. Freed:

. . . . . .

Q. What started the chlorine dioxide talks? Who contacted who and what were the circumstances?

A. As I recall it, our interest in chlorine dioxide started largely as a result of an indication which was conveyed to me by Mr. Shanaman, that the Solvay Process Division of Allied Chemical, who were then beginning to introduce sodium chlorate, had what I understand was a similar process which they were beginning to use in the northwest to help them in their sale of sodium chlorate. As I recall it they weren't manufacturing this but were re-selling. Mr. Shanaman felt that inasmuch as Mathieson had a similar process for the generation of chlorine dioxide from sodium chlorate, it should help him, Fred Shanaman, in the sale of sodium chlorate to the pulp and paper industry in the [fol. 1442] northwest, if he could have access to a similar process to offer to the pulp and paper industry. And that stimulated the suggestion that we contact Olin Mathieson, or Mathieson as it was then, to see if they would make available to us their process on the generation of chlorine dioxide from chlorate.

Q. Then the initial contact was made by you to Mr. Logan at the suggestion of Mr. Shanaman?

A. I think that's correct. I'm a little hazy on it, frankly. Whether actually Fred talked with John and then later on asked me to follow up on it I really don't recall.

Q. There is correspondence in the file which indicates that you and Mr. Logan discussed the matter at Sea View in May of 1953. In your recollection would that have been the first contact that was made, or does that not help your recollection?

A. It could be but I certainly couldn't swear to it.

Q. Prior to your discussions with Mr. Logan about chlorine dioxide, had Olin and Pennsalt been engaged in any other licensing agreements of this kind? In other words, was this contact the first of its character between the companies or was there already some background for Pennsalt and Olin to discuss a matter of mutual interest of this kind?

A. To my knowledge there were none before that.

Q. What was the particular objective that Pennsalt had [fol. 1443] in mind in seeking a license from Mathieson?

Mr. DeLone: I object to that. It seems to me it has already been covered.

By Mr. Freed:

Q. In particular, was there a patent infringement problem that you were concerned with?

A. No, I don't think so. I think it was more a, shall we say, a sales gimmick than any, what you term, a patent infringement problem. I am sure that probably the mills would feel easier if they had the process as a licensee from Mathieson than if they didn't. I think it has been proven subsequent to that time that the Mathieson process isn't in a strong patent position, if my memory serves me correctly.

Q. Mr. Drake, there is a series of correspondence which has already been furnished to the government by the defendants in this case relating to chlorine dioxide, and there is one particular letter in which there is a handwritten note we have been unable to deciper. I wonder if I could have the reporter mark this document as Plaintiff's Drake Exhibit 1. It is a letter from Mr. Logan to you dated May 25, 1953.

(The document referred to was marked Plaintiff's Drake Exhibit No. 1.)

I just wonder if you could interpret this for us, the writing that appears at the top of that letter.

A. No wonder you asked for a little interpretation [fol. 1444] It's: "Logan here will prepare proposed agreement on chlorine dioxide and send to me before S 12", that's Fred Shanaman, "leaves for west coast."

Q. Thank you, sir.

A. I don't wonder, however, that you couldn't read it.

Q. Without going through each of the items of correspondence that preceded the execution of the agreement, I wonder if you could tell us what the negotiating problems were that you and Mr. Logan faced. What was Pennsalt concerned with in the negotiations, and what were Olin's concerns?

A. Very frankly, I never felt that they were very, what you would call, serious negotiations. I think we asked them if they would be interested in licensing us, outlining why we wanted it, as I have already explained to you, and what did they feel was a reasonable figure, dollar-wise, and as you can see it was a nominal figure which was satisfactory to us. And frankly, the only real problem was to get the lawyers to put the words the way the two sets of lawyers could agree on.

Q. Was Olin's granting of a license to Pennsalt at this time considered to be something of minor value to each company?

A. Oh, yes.

Q. Then the 50 cent a ton payment which was required [fol. 1445] by Pennsalt to Olin was a true measure of the value that Olin then placed on what it was conveying to Pennsalt?

A. I obviously can't determine what Olin really thought, but I think the evidence would indicate that it was a true value. Otherwise they wouldn't have put it in there.

Q. In terms of the prospective sales which the agreement would enable you to make, I believe you testified that this would be a valuable sales gimmick, and I wonder whether the anticipated value to Pennsalt was in any way counterbalanced by expectations that Mr. Logan voiced to you about the value that would flow back to Olin from the agreement?

A. Let me see if I understand what you mean. Do you want to rephrase that?

Q. I believe you testified that Pennsalt considered this a valuable sales promotion tool, prospectively valuable. Presumably the sales would run into many thousands or hundreds of thousands of dollars prospectively. The agreement only called for what amounted to a very nominal royalty. I wonder whether you and Mr. Logan discussed the potential value in terms of ultimate dollars to Pennsalt from the agreement?

A. Not to my knowledge. I think I want to correct one thing. I don't recall that I said that it was an extremely valuable, or whatever the word was you used. I think its value was two-fold. It was defensive in one sense, and the other sense was gradually, as time and interest on the part

[fol. 1446] of the pulp and paper industry in the northwest permitted or developed, it would undoubtedly help us to sell some chlorate up there which we might otherwise not be able to sell. I don't think we put a tremendous value on the thing. As I say, again it was another sales tool which we hoped would help us sell chlorate.

Q. Was there any discussion at this time of Pennsalt giving Olin anything of value over and above the 50 cents a ton? Was there any understanding about reciprocal benefits to Olin from the agreement?

A. No, sir.

Q. In the letter of transmittal of the executed chlorine dioxide agreement dated July 31, 1953, you attached a note to Mr. Shanaman in which you stated, "I thought it well to send our check at the time we returned the agreement to John Logan. If you feel that you would like to reimburse the parent company for a portion of this at least, that will be up to you. Originally I think you talked in terms of paying for the whole of it but the thought occurred to me that if we make use of this we should not ask you to stand the full amount. However, I will let you be the judge on that score."

I wonder, Mr. Drake, if you could tell us what you meant by "the thought occurred to me that if we make use of this"? Who was the "we"?

[fol. 1447] Mr. DeLone: I can't find my copy of the document to which you are referring. I would just like to see it; if it's available I'd like to have the witness see it.

Mr. Freed: I will have the reporter mark this document, which is a letter from Mr. Drake to Mr. Logan, with a note to Mr. Shanaman attached to the carbon copy.

Mr. DeLone: Mr. Subak has now found it.

Mr. Freed: Please mark this document Plaintiff's Drake Exhibit 2.

(The document referred to was marked Plaintiff's Drake Exhibit No. 2 for identification.)

The Witness: Well, I think that indicates again the idea of an agreement with Olin Mathieson on chlorine dioxide was stimulated by Fred because of its use, its potential use, in the northwest. I think I must have been referring in my

note that the thought occurred to me, et cetera, that if and when we ever made chlorate in the east this might be of interest to the other part of the Company with which I was concerned, and I think there is a big "if" there which I would like to underline. In fairness to Fred perhaps we should consider absorbing a portion of that cost.

By Mr. Freed:

Q. Had there been any discussion at this time between you and Mr. Shanaman or you and Mr. Logan about the possible future use of the process in connection with Penn-
[fol. 1448] salt's eastern operations?

A. I don't think so. I certainly don't recall it.

Q. During the negotiations between you and Mr. Logan what was the territorial scope of the agreement that you were negotiating? To what extent was Pennsalt seeking and was Olin granting rights to use this process?

Mr. DeLone: I object to that in light of the fact that the agreement, it seems to me, speaks for itself. If I understand the question, you seem to me to be asking the witness to interpret the agreement.

Mr. Freed: I would like the witness to tell us, in his negotiations with Mr. Logan, whether there was ever any discussion about the territory in which this agreement would be used.

The Witness: I think the only limitation on the agreement was that it was domestic in scope as to where it might be used.

By Mr. Freed:

Q. I'm not referring, Mr. Drake, to the terms of the agreement.

A. Oh, no, I mean in the discussion.

Q. Then the understanding was that Pennsalt would be granted by Olin rights to use this chlorine dioxide process, or to license its use throughout the United States?

[fol. 1449] A. I think so, yes.

. . . . . .

[fol. 1450] Q. During the entire course of Olin's agreement and renewal agreement with Pennsalt relative to chlorine dioxide, it is your recollection and your testimony that Pennsalt was at all times entitled to use the Mathieson process any place in the United States in connection with its promotional efforts on sodium chlorate?

A. At all times anywhere in the United States. And again, I say I don't recall any limitation.

Q. Is it a fact then, sir, that during the entire period from 1961 until the consummation of the joint venture with Olin, you personally had no doubt that Pennsalt was entitled to use the Mathieson process in its sodium chlorate sales efforts in the United States?

Mr. DeLone: You said from 1961. I don't believe you meant that date, Mr. Freed.

Mr. Freed: I certainly meant to say 1951, sir—I'm sorry, 1953.

The Witness: Let me comment on that in this way. The agreement specified—I haven't read the agreement recently—but to my recollection the agreement specified that this [fol. 1451] applied to the United States, and there had been no side agreements or anything of the sort contrary to what is in that agreement.

By Mr. Freed:

Q. In light of your answer, can you state whether at all times in Pennsalt's consideration of selling sodium chlorate in the east you considered that the Mathieson process was one of the assets that your Company possessed?

A. It was available to us to use in the United States.

Q. Was your use of the process in fact confined territorially from and after July 31, 1953?

A. You mean from a practical standpoint?

Q. From a practical standpoint, sir.

A. I don't recall, and I can be wrong on this, but I don't recall that any sales were made other than those made by Fred Shanaman and the Pennsalt of Washington Division. As I say I'm a little hazy on that, but I don't think there were.

Q. In other words, Mr. Shanaman's testimony, which is now scheduled for next week, would be the best information

available in the Pennsalt organization with respect to the scope of use of the Mathieson process, and it is your testimony that Pennsalt in the east never, in fact, used the Mathieson process in its selling efforts? Do I understand you correctly, sir?

[fol. 1452] A. I don't recall that we did in the east, no.

* * * * * * *

[fol. 1453] Mr. Freed: Exhibit 2 then will have 5 pages.

By Mr. Freed:

Q. Mr. Drake, at the time you and Mr. Logan negotiated the 1953 agreement, was there any discussion of the sodium chlorate potential market in the eastern part of the United [fol. 1454] States?

A. Again I don't recall it if there was; I doubt it.

Q. Can you now recall the first occasion on which you and Mr. Logan touched on the subject of the production and sale of sodium chlorate in the east?

A. Specifically, no, although I would guess that it would be somewhere in, oh, the '56 or '57 period.

Q. It would have been several years after the execution of the original chlorine dioxide agreement; is that correct, sir?

A. I would think so, yes. Again I emphasize, to the best of my recollection.

* * * * * * *

[fol. 1455] Q. Turning then to the first time you can recall consideration by Pennsalt of producing sodium chlorate east of the Rocky Mountains, can you tell us the date or the circumstances under which this possibility was first mentioned?

A. I can't recall the exact date. I would guess that for a number of years, maybe as much as, oh, eight or ten years, consideration from time to time has been given to the production of chlorate in the east by Pennsalt. I think to best [fol. 1456] exemplify what I am driving at, in '57, early '57, you may recall reference in the file to a note that I wrote to, I think, Messrs. Land and Shanaman, which, in effect,

said let's either fish or cut bait, as far as chlorate is concerned. We've been talking about it, deciding not to do it, talking about it and deciding not to do it. I don't know how many times the Company had done that before I had anything to do with it, really. But it has been going on for some time. And each time we would come up and find out it wasn't a profitable venture and shelve it.

Q. When you say, sir, that it did not look like a very profitable venture, are you referring to the projections of return on investments which you were able to make at that time, or were there other reasons which, in the early days of Pennsalt's consideration, led to rejection of an eastern plant?

A. Being somewhat familiar with the keen interest that the Company had in chlorate, as expressed by Fred Shanaman particularly, I am sure that the only reason that the Company did not long ago go into the production of chlorate in the east was the return on investment. I have never seen a project that has been introduced more times and turned down than this one.

Q. Considerations of chlorate in the east, I now wish you to address your attention to the panorama of considerations [fol. 1457] rather than any particular meeting at this time. What were the principal eastern markets that kept you interested in sodium chlorate?

A. The large outlet for sodium chlorate, or the growing outlet, being in the pulp and paper industry, I'm sure that the largest area that we contemplated serving was the southeast. There could have been a little up in the Wisconsin area but by comparison it was certainly less.

Q. Was your interest confined to the pulp and paper industry?

A. Largely, I would say, yes. There would be some in the ag-chem field, but it's relatively small by comparison.

Q. Prior to 1957 were your considerations of an eastern facility based on a lone venture or a combination with some other company?

A. I don't recall that the joint venture idea was considered at all prior to '57. I'm fairly certain of that fact.

Q. Then at least up to '57 Pennsalt's interest in sodium chlorate in the east was as a lone venture for Pennsalt?

A. (Nodding head.)

Q. In terms of the other activities of Pennsalt's eastern operation, how did sodium chlorate fit in? Was it a logical extension of your then existing activities?

[fol. 1458] A. Logical from at least one standpoint. There was a considerable knowledge of electrolytic processes in the east as there was in the west. I think an observation might be helpful to you at this juncture on that score. Until fairly recently, the growth thinking of our Company has been dominated pretty much by production-minded people. I think we had a tendency more to think in terms, well, if we can make it let's go into it. Now I am hoping that the pendulum isn't swinging entirely the other way, but that we are going to have, and we do have, a better balance in determining not only whether we can make it, but whether we can sell it.

As I have said in our shop many times, no one ever made anything at a profit; it has to be sold.

Q. In terms of your sales prior to 1957, did sodium chlorate fit into your existing organization?

A. Prior to '57?

Q. Yes, sir.

A. You're talking now of the eastern sales organization?

Q. That is correct, sir.

A. No. Now there was a period there when some of our ag-chem, in fact our headquarters for ag-chem were east for a short time. When I say "no" I think I must clarify the ag-chem group probably could have handled some of the sale of chlorate in the east, but we had no representation [fol. 1459] down in the southeast, and the use, as I mentioned before, of chlorate in the Wisconsin area was, as I recall it, relatively small. I don't think the nature of the mills up there are such that they require this type of bleaching.

Q. When you say there was no—strike that.

When you suggest that there were no sales in the southeast, are you testifying that Pennsalt had no selling organization in the southeastern part of the United States in this period?

A. First I don't think I said there were no sales in the southeast. If I did, I didn't intent to.

Mr. DeLone: You said you had no representation in sales.

The Witness: I'm sure we had some sales. What they were I don't recall, but we had no representation in the southeast of any magnitude. We had a few jobbers that were selling small amounts of caustic soda and things like that, but I don't think we had—I know we didn't have any direct sales organization in the southeast.

By Mr. Freed:

Q. During your consideration of the sodium chlorate project in the southeast prior to 1957, how did you contemplate selling the product?

A. We would have to develop a sales organization to do it.

[fol. 1460] Q. Was the development of a sales organization in the southeast actively considered at this time?

A. No, I don't think so because each time we looked at the project, the return just discouraged us, that's all. We never got to the point where we even considered the selling end of it, and bear in mind again, I think this is very important, the thinking of the company as to the domination of the production mind rather than the marketing mind. I think that is very important.

Q. Mr. Drake, there are many articles and publications which suggest that the pulp and paper industry of the southeast today is a leading consumer of chemicals. Does your Company engage in the production of chemicals which are in demand by the pulp and paper industry of the southeast?

A. Well, first of course, we produce in the northwest chemicals that would be in demand in the southeast. We produce that both at Wyandotte, Michigan and Calvert City, chlorine and caustic soda, and they certainly are examples of products which are used in the pulp and paper industry.

Q. Have you, since 1953, developed your sales, any sales of consequence, to the pulp and paper industry of the east?

A. I wouldn't say of consequence, no.

Mr. DeLone: Did you say of the east or the southeast?

[fol. 1461] Mr. Freed: Of the east.

The Witness: You're speaking now of the pulp and paper industry of the east, however?

By Mr. Freed:

Q. That is correct, sir.

Can you tell us why Pennsalt has refrained from developing the paper industry of the southeast as a large market for its chemicals?

A. I think primarily because it was unprofitable to do so. You see, there were chlorine and caustic plants scattered all through the southeast. The only way to reach a customer is to equalize freight, which means you go right past your competitor's door and he has got a distinct advantage from that standpoint because of his proximity to the customer, and so long as we could sell the output of those plants without having to equalize freight of that magnitude, why, we just didn't choose to do it.

Q. If the return on investment which your Company calculated prior to 1957 on a sodium chlorate facility in the east had been high enough to meet your policy objectives, how would you have gone about developing the sales organization required to sell the output of the plant?

A. This obviously is conjecture on how it would have been done. I would think, however, that we would probably try to do one of several things. We would probably put [fol. 1462] some men up in the northwest for a couple of years to get the benefit of the knowledge that exists up there. With that knowledge then they would be transferred to the southeast and they would then start from scratch, trying to develop their contacts among the pulp and paper mills. Now those contacts would be, well, shall we say, multifarious. They would be purchasing departments, the technical people in the plants, the plant superintendent, all of whom would have to be cultivated to develop a knowledge of Pennsalt; we would hope a liking for our representatives, and a certain degree of confidence that this newcomer in the area had a product of quality, or could produce a product of quality which would meet their requirements.

Q. If Pennsalt had undertaken a sodium chlorate project in 1956, how long do you estimate it would have taken to develop a sales force capable of selling the output of this size plant contemplated?

Mr. DeLone: Would you specify the size plant you have in mind, because there were so many different estimates? I think it would be simpler to answer it that way.

By Mr. Freed:

Q. I believe in the period up to 1957 the plants were in the range of 8,000 to 15,000 tons.

A. That's about right. They went from 7,500, something like that, 15,000. The question is, how long would it take [fol. 1463] to develop a sales force to sell the output of such a plant?

Q. How long would it have taken had you begun in late 1956?

A. That's really a $64 question.

Q. Mr. Drake, didn't you consider the selling aspects of your projected sodium chlorate plant during the years up to 1957 in which you were contemplating a sodium chlorate venture in the east?

A. Again I emphasize, and again over-emphasize, the factor that I mentioned before, that the Company's thinking was more attuned to production than it was to sales, and I think, improperly, for a balanced growth of a company. And I think we have taken some steps to correct that, but I think in all honesty I think I have to say that unfortunately our thinking as to how we were going to sell the product was pretty far down on the totem pole.

Q. Can you recall the discussions which you had prior to '57 about the manner in which Pennsalt would develop the necessary selling organization?

A. No, I can't, really.

Q. Do you mean by the testimony you have just given, sir, that had the return on investment of Pennsalt's sodium chlorate plants up to the beginning of 1957 been satisfactory in terms of Company investment, policy objectives, that the Company would have gone ahead with such a project and permitted the selling of the product to follow [fol. 1464] in a natural course? Is that the import of your testimony, sir?

A. I'm sure that at some point before the decision was actually made to go ahead with it, assuming the return on investment was satisfactory, that someone would have been

charged with saying how they were going to sell it and when, and if possible, to whom.

Q. But in the years prior to 1957 the Company would not have been as concerned as it is today about how it would go about promoting the sales of a project which appeared to be profitable in terms of your policy objectives; is that correct?

A. Again I say, unfortunate as it was, I think that is a correct statement.

Q. When was it that you first decided that Pennsalt could not successfully sell sodium chlorate in the east on its own?

A. I would think it was probably in the '56, '57 period of the volume that would be required to get a decent return.

Mr. DeLone: Your question said to sell in the east. I assume you meant by that produce and sell?

Mr. Freed: Yes, sir, I stand corrected, and does that influence your answer in any way, sir?

The Witness: No.

[fol. 1465] By Mr. Freed:

Q. Beginning then in 1957, was your thinking with regard to sodium chlorate geared solely to a joint venture operation?

A. Not solely at the outset. As I think I mentioned before, touched on it briefly. Early in '57, as you will recall, I think I recall it was at the time Oldbury announced a further expansion of their plant. I couldn't understand why, after we had looked at this thing for so many times, other people would go ahead with it and we couldn't. Was there something the matter with us? So we had a full-blown session on sodium chlorate, which I think I termed, to decide once and for all whether we were going to do something with it. That was early in '57 as I recall it. Some preliminary figures were made up on various sizes of plants, and I think shortly thereafter came the Arthur Little Report on the market side. The initial figures on the estimated cost on plants of—I think they were roughly 15,000 and then 20,000 and 25,000 tons, were of the magnitude of what we would call plus or minus 25 per cent. The engineering had not been refined to a closer degree than

that. Each one of those, of the smaller plants, showed a very inadequate return in terms of our investment policy. The 25,000 ton plant initially showed a much better return. I think that's, again, part of this final decision as to whether we were going to go ahead or not. I hoped it [fol. 1466] would be a final decision.

The initial return estimate of the plus or minus 25 per cent looked close enough to our requirements, return on investment-wise to then find out more about the markets for the product, and then to determine whether we could sell the volume required to get that return.

Mr. DeLone: Your reference there is to the 25,000?

The Witness: 25,000 ton plant.

Now during that Arthur D. Little survey, as I recall it, we also refined our costs to a plus or minus ten per cent. That, incidentally, reduced somewhat the return on the 25,000 ton plant. I don't recall exactly the figures but I think it dropped from around 25 per cent to about, oh, 19 or 20 per cent. I think it was about then that this matter of our deliberations as to whether the possibility of a joint venture came into the picture.

By Mr. Freed:

Q. The Little Report, I believe, was delivered in August of '57 and your evaluations of it proceeded in the next few months of 1957; is that correct?

A. Well, the evaluations of that and the other factors in the project, yes.

Q. In your considerations at that time in the latter part of '57 of a joint venture, had Pennsalt made a decision whether it could or could not proceed on its own?

[fol. 1467] A. No, it hadn't.

Q. The consideration of the joint venture was one of the factors that entered into your deliberations on how to proceed?

A. That's right.

Q. When was it that Pennsalt first learned of Olin's interest in entering the sodium chlorate business?

A. I can't answer that specifically but I know it was late, probably in '56, maybe.

Q. Were you the one who learned of Olin's interest?

A. No, I don't think so. I think it either came from discussions with either Fred Shanaman or possibly Land had had with Olin. I don't recall that it came up initially with me.

Q. In late '56, what was your understanding about Olin's interest in the sodium chlorate business in the east?

A. Well, this is recollection now, but I think probably an expression of theirs that they had thought about chlorates in the east, or an expression of ours that we had thought about chlorates in the east, and whichever one made the comment first, it probably was passed back to the respective companies with the question, would we have any interest in exploring this with Olin Mathieson.

Q. Your recollection, Mr. Drake, is that the first knowledge on the part of Pennsalt that Olin was interested in [fol. 1468] the sodium chlorate business was communicated to Pennsalt, to an individual other than yourself; is that correct?

A. I think so, yes.

Q. Either Mr. Shanaman or Mr. Land would be able to tell us?

A. Yes, I think so.

Q. Do you recall who in the Olin organization spoke with Mr. Land or Mr. Shanaman?

A. No, I don't. My guess would be that probably Shanaman would be the one because he would have had, probably at that time, would have had more occasion to talk with Olin than would any of the rest of us.

Q. Why was that?

A. Because of the—primarily I think because of the chlorine dioxide process which he was using.

Q. Did the chlorine dioxide process and the agreement, which covered it, require extensive consultation between Olin and Pennsalt?

A. Not necessarily, no.

Q. At the time you first learned of Olin's interest in the chlorate business, was it your understanding that Olin was interested in becoming a seller or that it was interested in becoming a producer and seller?

A. I don't think it was refined to that point. I'm not sure. I do recall, I think it was early in '57, and Fred [fol. 1469] Shanaman developed with Mathieson, as a part

of the exploration, as to where we might go, we, Pennsalt, might go with a chlorate plant in the east; discussed the possibility of supplying some limited quantities to Olin to see what they could do with it in the east. I don't recall how much was supplied in '57 but I think there were some limited quantities, I think it was '57.

Q. Did you participate, Mr. Drake, in any of the negotiations with Olin which resulted in Pennsalt furnishing some sodium chlorate to Olin for marketing in the east?

A. Let's see. I'm quite certain that at some point I came into the picture, and as I recall it, it was one time when Fred Shanaman was east. John Logan came up from Baltimore and I think Fred and John and I and possibly Hugh Land had a discussion with John. This may have been a bit along in our thinking as to how much interest either Pennsalt or Mathieson had in the possibility of a joint venture, but I do recall a meeting at that stage with Mathieson on it. Subsequent to that, I think it was subsequent to that, I explored with John Logan the possibility of where might a plant be located. As *a* recall it, he looked at a couple of locations where they already had plants. One I think was at McIntosh, Alabama and the other was at Brunswick, Georgia, and as this comes back to me, I think that primary interest at that stage of the game was, what kind of a power cost we might enjoy, power being an im- [fol. 1470] portant factor in the economical production of this material.

Q. At the time you were discussing locations and power costs, had a firm decision been made by Pennsalt that if it went into the chlorate business in the east it would be as a joint venture?

A. No, I don't think even at that stage any firm decision had been made.

Q. At the time the arrangement was made for Pennsalt to furnish sodium chlorate to Olin for sale in the east, was it contemplated that Pennsalt would lose money on those sales?

A. It depends on to whom you're addressing that question, I think, somewhat in this regard. Theoretically, if we could have sold all of our chlorate at that time in the northwest and had to pay the freight east, we certainly would have made no profit, possibly lost a little. Frankly, I am

not convinced in my own mind that at that stage of the game we were able to sell our entire output in the northwest and that the limited quantities that we were shipping east, therefore, were extra, so called, and had we not produced it and shipped it, I really don't know whether we would have fared better or not. That is why I smiled a bit when you asked the question.

Q. Then you didn't consider it then to be a losing [fol. 1471] proposition? This was a way of marketing profitably a portion of your sodium chlorate output?

A. That isn't what I meant to convey to you. I think the intent, the principal intent, was of market exploration, but to be in conformance with the oath that I just gave a while ago, I have to make this other comment, which I did about the question as to whether we could, at that particular time, sell all of the output of the plant up in the northwest. It was not long after that that we could sell all there was in the northwest because I recall that—I'm hazy on the dates, but I know that there was a time when Mr. Shanaman said that, "Well, are we going ahead with this thing or not because I can't continue to ship to the east. I need the material up here."

Q. In other words, at the time the arrangement was first made Pennsalt was not marketing the full output of its chlorate plant on the west coast, but subsequently Mr. Shanaman felt that he could so market it, and from that time after?

A. I think there was a temporary period there when we had some excess on the west coast and the northwest.

Q. But that excess did exist?

A. So that the decision to explore the markets in the southeast was not as difficult to make on the part of Fred Shanaman to relinquish that tonnage at that time. I think [fol. 1472] it facilitated, if anything, the exploration of the southeast.

Q. Do you recall the discussions which you had with Shanaman and Logan and perhaps Land with regard to the exploration arrangement?

A. I don't recall it specifically in regard to the exploration arrangement. I know that we did have a meeting again when Fred Shanaman was east, at which time we felt that the thing was looking sufficiently interesting, although no

commitments were made at that stage, but it was sufficiently interesting for each of us to conclude that we would keep each other advised of our thinking in regard to chlorate in the east. Again, I emphasize, with no commitments, and there is nothing on the order of, well, we won't go into it, or you won't go into it, but as a matter of—just as a courtesy that you would have with a distributor. If you're going to drop a distributor and sell direct, you would give the courtesy to the distributor of telling him before he woke up and found a salesman calling on his customers. Well, that was the nature of the discussion to which I am referring.

Q. With Mr. Logan?

A. With Mr. Logan and Shanaman and; I think, Land was in it.

Q. During these discussions was Pennsalt still considering the possibility of producing sodium chlorate in the east? [fol. 1473] Mr. DeLone: Would you define what you mean by "these discussions"? We have been referring to one meeting and I don't know what you mean by "these discussions".

By Mr. Freed:

Q. During your discussions with Mr. Logan with reference to the exploratory arrangement and with the understanding that each of you would advise the other——

A. Yes.

Q. —of your continuing interest, was Pennsalt then still considering the possibility of producing sodium chlorate in the east?

A. Yes, I would say we were. No final decision had been made on it.

Q. And when did you first learn that Olin was considering producing sodium chlorate in the east?

A. I can't say that I ever learned that they were considering producing chlorate in the east until shortly before January of 1960, and what led up to this initial meeting with Messrs. Block and Logan, and for a very short period, Mr. Osborne, I think must have stemmed from discussions either Land or Shanaman had had with Logan or Block, where the indication was, well, let's seriously consider

going into this jointly. I think that was really the first indication that I had that they were, in your terms, con-
[fol. 1474] templating production of chlorate in the east.

Q. Do you recall who the principal eastern producers of sodium chlorate were during 1957 and 1958?

A. I think they were American Potash and Hooker.

Q. Did you know that at least since 1955 Olin had been engaged in efforts to develop a process for producing sodium chlorate?

A. That came out in one of our discussions in January. It came up at the time we were evaluating the relative merits of the various processes, of which one was Pennsalt, that might be used in what is now the Penn-Olin plant.

Mr. DeLone: Came up in January of what year?

The Witness: '60.

By Mr. Freed:

Q. During the January 1960 discussions with Olin what did you learn about the efforts which Olin had previously made to produce sodium chlorate or develop a sodium chlorate production process?

A. I learned this, and I think you have to put it in its proper perspective. At that point we were evaluating the relative contributions that the companies, the two companies, might make to a joint venture. Obviously you have to take at face value what a person, whom you think is an honorable person, or you wouldn't deal with them if you didn't think that they were, says about how much they have
[fol. 1475] done in the development of a process. Obviously I am sure that Olin Mathieson was putting their best foot forward to convince us that they had a process that was equally as good as ours, so that we wouldn't place too great a value on our process.

I think I must say that because I think you have to take it in light of the conditions existing at the time. We were beginning to, in effect, negotiate. I don't know how much they had done on it, I still don't know how much they had done on the development of a process. I think they had talked with some foreign operation about a cell, a Krebs cell, I think this was, and in effect I think they were endeavoring to sort of pooh-pooh the idea that we had

much of a process. We obviously didn't agree with that, but I think that's the best answer I can give you as to when I really began to have any indication from them that they had done much of anything on the development of a chlorate process.

Q. During those January 1960 negotiations, did the Olin people suggest to you that they were capable on their own of producing sodium chlorate?

A. I think they endeavored to imply that for the very reasons that I mentioned.

Q. Apart from their reference to the negotiations they had had with Vickers-Krebs with regard to a sodium chlorate cell, did they indicate anything further about the [fol. 1476] development work which they had been doing in the sodium chlorate production field?

A. I think they made some reference to work that they had done, and I don't, to this day, frankly know whether they were doing it to make chlorate, to sell chlorate, or whether they were doing it to make chlorate, to convert to perchlorate.

Q. What did they say about the development work they had done?

A. I don't remember specifically what they said. As I indicated before, they were trying to give us the impression again, in light of these negotiations, that Pennsalt didn't have all the knowledge in the world on how to make sodium chlorate, and I think if I were in their situation I would have done exactly the same thing.

Q. Can you pinpoint, sir, the meeting or the time in January of 1960 that this discussion took place?

A. Well, let's see, it was early in January because things happened awfully fast from then on. Between that time and February the 11th, I think it was, when we put out an announcement.

Q. Where did the meeting take place?

A. In New York at Olin Mathieson's office.

Q. Prior to that meeting had Pennsalt previously made a decision with respect to a joint venture?

[fol. 1477] A. We had made the decision that we didn't see how we could go it alone.

Q. And when was that decision made?

A. I would think probably about—shortly after we recog-

nized the two things that we had to have, a minimum of 25,000 ton plant and that, as a result of the Arthur D. Little Report and the evaluation of our sales people, it was concluded that we just couldn't sell that much or anywhere near it.

Q. Can you fix a date before which Pennsalt was considering entering the production of sodium chlorate in the east on its own and after which the only alternative that remained open were joint venture or no venture at all?

A. It's difficult, I wish I could, but it's difficult to do it because, not only were there those factors which I have just mentioned, but also lurking in the outskirts, so to speak, was always the possibility that the surge in demand for ammonium perchlorate, which has been anticipated by some at least for some time, would occur. Now if that did occur or if we could contemplate that it would occur in the relatively near future, the conversion of a portion of the production of that chlorate plant to perchlorate would have relieved the problem of selling the chlorate and, incidentally, would have improved the return on investment on the overall project, so that all through this that was always [fol. 1478] a possibility. I don't recall specifically when that was done.

Q. Did Pennsalt ever actually decide then not to go alone prior to the time that these joint venture discussions took place in New York in January of 1960?

A. I wish you would repeat that again. I'm sorry, I lost you.

(The reporter read the question.)

Yes, yes.

Q. When was that decision?

A. I would say late in '59.

Q. Can you recall a meeting at which this was decided?

A. Specifically, no, I cannot.

Q. Can you recall who made the decision?

A. Ultimately I guess I did.

Q. What were the factors that caused you to make the decision with all these doubts about ammonium perchlorate and other factors in the air?

A. Well, what our sales people felt they could sell and with the extreme—what is the word I want—looseness of

the estimate of the demand for perchlorate, it became obvious that the return on the investment was so low that the risk involved was not worth taking.

Q. What were the sales estimates of what Pennsalt itself [fol. 1479] could have done that entered in your decision?

A. Oh, I think the best I have heard, and these have varied, but they ranged from 8,000 to 12,000 tons in a period of time. That is a far cry, obviously, from 25,000.

Q. But at the time you made the decision in late '59 that Pennsalt would not proceed alone, the best sales estimate that was available to you was 8,000 to 12,000 tons per year of sodium chlorate sold in the east?

A. Yes, and it would take a while to reach that figure.

Q. In the discussions that you had with these sales people, how long did they think it would be before they could make those sales?

A. Well, they were estimating, obviously, but I would say three, four years. I'm sure it's somewhere in the file but I don't happen to recall what it is.

Q. In light of the projection of the possibility that Pennsalt could make sales in the range of 8,000 to 12,000 tons over a period of several years, did you consider the possibility of going into the sodium chlorate facility with Olin as an agent, sales agent?

A. I'm sure that at some stage of our thinking all through this we contemplated that among other possibilities, such as the joint venture, for example. I don't recall that we gave any lengthy consideration to it, but I think I would be remiss if I didn't say that undoubtedly we gave [fol. 1480] that some thought.

Q. What was the latest time prior to the creation of Penn-Olin Chemical Company that you gave consideration to asking Olin to be a sales agent for Pennsalt's sodium chlorate plant in the east?

A. I don't think we gave it that serious a degree of consideration. I mean, there were too many factors in there that would leave us rather vulnerable from an investment standpoint.

Q. Could you tell us what those factors were?

A. Well, normally a sales agent would be one who would sell as much as they could. Well, now in order to get, whether it's Olin Mathieson or any other agent, to push

the product, why, obviously, you've got to make it attractive to them. In other words, your margin on the thing has got to be enough so that they will push that product as against something else. The tendency on the part of any producer is to push their own products, and a natural tendency. Unless, and we felt it would be inconceivable, I'm sure, at that stage at least to have Olin guarantee to take a certain output so that we could minimize the risk that we were taking, why it just wasn't a plausible way to proceed with the project as we envisioned it then.

Q. Wasn't Olin then engaged in selling a full time of [fol. 1481] chemicals to the pulp and paper industry of the south?

A. I don't know what you mean by "full line". I imagine they were selling caustic and some chlorine, and what else I really am not familiar with what else they do sell.

Q. Altering my question, wasn't Olin engaged in making substantial sales of chemicals to the pulp and paper companies of the southeast?

A. Yes, I think so.

Q. And sodium chlorate would have been, as it is now, simply an additional chemical in the salesman's line; is that correct?

A. Uh-huh.

Q. It would not have required much additional investment on the part of Olin in terms of time or in terms of personnel or dollars or equipment to simply add another chemical to their salesman's lists; is that correct?

A. I can't—I don't feel I know enough really to make that assumption. I don't know how much they would have to add in the area of technical service in the utilization of the chlorine dioxide process, which is conversion from chlorate to the chlorine dioxide.

Q. Are you familiar, Mr. Drake, with the deposition taken two weeks ago of Mr. Northgraves of Olin Mathieson?

A. Somebody mentioned that he had had a deposition but that is as much as I know about it.

[fol. 1482] Q. Subject to the introduction of that deposition, or the testimony of Mr. Northgraves at trial, I think it's fair to say that Mr. Northgraves testified the need for

technical service to the pulp and paper industry in connection with chlorine dioxide generation was virtually at an end because most of the chlorine dioxide capacity of the pulp and paper industry has already been installed. Is this something that you have heard of before?

A. I haven't, frankly, heard that statement before. I'm a little surprised to hear it, frankly, because the pulp and paper industry have been using chlorine and caustic soda for many years, and if our people in the northwest are accurate in their appraisal, a continuation of a technical service group, serving the pulp and paper industry just on chlorine and caustic, is a very integral part of the sale of chlorine and caustic to the pulp and paper industry. And you don't do anything or don't do as much with chlorine and caustic, as I envision, and I must admit that I'm not a technician and I may be all wet. I would think, however, that if you needed it on chlorine and caustic you also needed it on a chlorine dioxide, but he's the expert and I'm not, so obviously you have to lend some weight to what he says.

Q. I do not mean to state as a fact for the record that this is what Mr. Northgraves said. I tell you this is my understanding and ask you whether you have previously, [fol. 1483] previous to this morning, heard that Mr. Northgraves so testified, or have, previous to this morning, acquainted yourself with the current thinking in the Olin organization with regard to the need for technical service in the chlorine dioxide sodium chlorate sales area?

A. The answer to that would have to be "no" on both counts.

Q. Assuming if you will, Mr. Drake, that the need for technical service in connection with the sales of sodium chlorate is minimal, are there any reasons apart from technical service why Pennsalt did not explore with Olin the possibility of continuing and elaborating the sales agency arrangement which had existed in sodium chlorate since 1958?

Mr. DeLone: Mr. Freed, it seems to me he answered that question just a little while ago without reference at all to technical service.

By Mr. Freed:

Q. Did the question of Olin as a sales agent for Pennsalt come up at all in the discussion in New York in January 1960 with Olin?

A. No, unless you can interpret the period between the time we would start building a plant until it would be on stream that they would technically be serving as a sales agent, perhaps, for that amount of material that they would be getting from our northwest operation.

[fol. 1484] Q. Did Pennsalt make any efforts to explore the possibility of any third party, or third parties, acting as distributor of sodium chlorate in a 25,000 ton facility to be erected solely by Pennsalt?

A. I don't think so.

Q. And can you tell us why these possibilities were not considered?

A. I think for the same reason I expressed before, that the vulnerability, when the volume is so essential to the, even the break-even point of a project like this, that to put yourself in the hands of an agent who has no financial interest in the venture is a little more risk than I would want to take in this type of venture.

Q. Are there other chemicals on which Pennsalt relies heavily on distribution through sales agents?

A. One area that I can think of only. That's in our laundry-dry cleaning department where I think most all of our products, if not all, are sold through what we call jobbers, but we've got, I don't know, 50 or 60 salesmen who are keeping after the jobbers all the time, so I think the situation is quite different.

Q. Was there something unique about sodium chlorate that precluded you from exploring the possibility of entering into contracts with other chemical companies or other agents for the sale of sodium chlorate from Calvert [fol. 1485] City?

A. Yes, it's largely a one industry product, and Lord knows, the competition for that material already is pretty keen. Now here we are adding another competitor and I guess we aren't the last, from what I gather. You have got to have someone that knows the field, is known by the field, and I think that's equally important, and we feel someone

who has a financial interest in making certain that the volume is developed. It's too easy as a jobber of a product, if the going gets a little tough in your selling, to say, oh, well, we only make a small margin on this thing anyway, we'll devote our time to our products that we make, which is all right for them but it wouldn't be very good for us who are, shall we say, holding the bag with a 7 plus million plant.

Q. Did you consider a joint venture with anyone other than Olin?

Mr. DeLone: You're now talking about for the marketing of sodium chlorate.

Mr. Freed: That's right, thank you.

The Witness: No, No, I don't think so.

By Mr. Freed:

Q. Apart from your prior sales and license agreement arrangements with Olin, what prompted you to choose Olin as the joint venturer?

A. Well, it's pretty hard to say, apart from, because [fol. 1486] those are pretty important, I think, in our—in the development of this. Obviously from that we learned that Olin had close contacts with the pulp and paper industry and they would seem to be a very logical person to approach or discuss this matter of a joint venture on the chlorate.

Q. Were they—did you consider Olin to be clearly superior to other potential sellers of the output of your joint venture plant?

A. For chlorate to the pulp and paper industry?

Q. Yes, sir.

A. Yes, sir.

Q. Can you tell us the bases on which you considered Olin to be superior to other potential sellers of sodium chlorate?

A. Well you can look at it first from the negative standpoint, who else is there?

Q. You're in the industry, sir, and I'm not.

A. Well, actually with the exception of Allied's Solvay Division I don't think there is anyone else selling chlorates to the pulp and paper industry that isn't producing it.

Q. Were there other companies who were engaged in successfully selling a large volume of chemicals to the pulp and paper industry, even though their chemical lines did not then include sodium chlorate?

A. I'm not too familiar with what the various companies are selling to the pulp and paper industry. There were [fol. 1487] some that sell specialties, so-called. How much companies like DuPont and Dow and American Cyanamid sell to the pulp and paper industry I'm just not familiar with.

Q. Is it possible that Pennsalt might have entered into sales agency arrangements with several chemical companies such as those you have mentioned in an effort to market a portion of its own facility at Calvert City?

A. You ask me a rather difficult question for me to answer, because I won't say that anything is impossible. I think it would be impractical.

Q. How would that be, sir?

A. Well, again, you come back to the importance that any company would lend to the sale or the resale of a product or in the effort they would put behind that sale, and we just think that's too great a risk to take with us putting all the investment in the plant.

Q. At the ime you entered into the joint venture agreement with Olin, was it your thinking and the thinking of the Pennsalt organization that this was the most advantageous way for a newcomer to break into the southeastern market for sodium chlorate?

A. I don't really think we gave much thought to the question as you posed it. I will answer it in this way, if I may, that we thought, and still think, that it is the most advantageous way for Pennsalt to enter that market.

[fol. 1488] Q. During your discussions in New York in January 1960 with Olin did the Olin people at any time suggest that they, as an alternative to the joint venture or absent the joint venture, might enter the sodium chlorate business on their own as a producer?

A. I think I answered that in part when I referred to the negotiations, when we were talking about the technology available to each of the two companies, and I think you have to take my answer in its proper context, and in view of the conditions as they existed at the time, those condi-

tions being again one of negotiations. To my knowledge Olin never specifically stated that they were contemplating or could go into the production and sale of chlorate. They obviously in the negotiations implied that they could, and that is extremely important, I think, to recognize the conditions under which they implied that. They were putting their best foot forward to minimize, if they could, to us the value that we placed on our technology.

Q. Do I correctly understand you, Mr. Drake, to have testified that these negotiations in New York in January in 1960 were the first suggestion to you that Olin believed itself, or was claiming itself, able to become a producer of sodium chlorate on its own?

A. I think you're putting that a little strongly when you [fol. 1489] say, "claimed itself" or "believed itself." They tried to convey to us that they could without—I don't recall their specifically stating that they could. I think it's a fine point but I think it's a very important one. We didn't have the luxury, incidentally, of being able to turn the tables and saying, well, we could sell it too.

Q. When Olin suggested that it might be capable of becoming a producer, did you take their statement at face value or did you have some other reaction to it?

A. Well, I think the answer to that is, the relative value in the joint venture is 50-50, so they must have put some value on our technology and they must have been bluffing to a degree as to their ability to produce as economically as we can sodium chlorate.

Q. Have you, Mr. Drake, familiarized yourself with the deposition taken last week in Baltimore of Doctor Bruno Wojcik, W-o-j-c-i-k, who for many years headed the Research and Development Division of Olin's Chemical Division and, in particular, supervised Olin's efforts to obtain sodium chlorate productive capability? Are you familiar with his testimony, sir?

A. No, sir. Again I know that he gave testimony.

Q. I state to you, subject to introduction of the deposition or Doctor Wojcik's testimony at trial, that it was his [fol. 1490] testimony that Olin had the ability for many years prior to 1960 to enter upon the production of sodium chlorate, but through this period was engaged in research

and development on new techniques of embarking on such production.

Is my statement to you now, and subject to its verification by the testimony of Doctor Wojcik, the first indication that you have had that Olin was for many years seriously considering entering upon the production of sodium chlorate?

Mr. DeLone: Excuse me, but the question was, first you said that they had the ability. Now you end up saying that they were seriously considering. It seemed to be two different thoughts there and I think the question is confusing. Which are you talking about, Dr. Wojcik's claim, as you expressed it that they had the ability, or a claim that they were seriously considering doing it?

Mr. Freed: I should have, sir, added to my statement concerning Dr. Wojcik's testimony that he did testify that Olin was seriously considering during a good portion of this period becoming a producer of sodium chlorate and supplementing my description of his testimony in that way, I ask you whether my statement to you this morning is the first indication that has ever come to you that Olin Mathieson Chemical Corporation had considered, for a substantial period prior to your joint venture, arrangement, embarking [fol. 1491] itself on the production of sodium chlorate?

The Witness: Again I have to refer to the negotiations in January in New York, at which time they tried to convey as best they could to us that they had the facility to go into this business. Again, I repeat that I interpreted that as a negotiating statement.

Now as far as Dr. Wojcik is concerned, we have the Dr. Wojciks in our organization too. If you were to talk to any number of our scientists they would assure you that they had a process that would do wonders for the company, and they never can understand why the company is so stupid and shortsighted not to go ahead with their process. I don't know whether this applies to Dr. Wojcik or not. My only reason for even referring to the similarity of situations is that I was under the impression that in the technical evaluation of the various processes to use in the Penn-Olin plant, it boiled down, as I recall it, to whether

we use the—I think you said the Vickers-Krebs cell or whether we use a Pennsalt cell. I don't recall that much, if any, consideration was given to the developments of Dr. Wojcik.

Now this is only a recollection and I may be misinformed on it, but I think, again, the testimony of the Dr. Wojcik has to be, or should be recognized in that light. They're [fol. 1492] human beings and, bless them, we need them and we need more of them, and I compliment him for his confidence in what he has developed.

Q. Do you, sir, doubt that Olin was capable and had seriously considered embarking on the production of sodium chlorate prior to January 1960? Do you have any information concerning it?

A. Specifically, no, no.

Q. Accepting the statements or suggestions which Olin made to you in the January 1960 meeting about their production capability, accepting those statements at face value, would not Pennsalt and Olin then in January 1960 have been potential competitors of one another?

A. No, no, they wouldn't have been because we wouldn't have gone into it.

Q. And that was because your decision had been made in the latter part of 1959 not to go alone?

A. We could not move the material.

Q. If in fact Olin was capable and was seriously considering entry upon the production of sodium chlorate prior to the latter part of '59, going back into early '59, '58, '57, would it then be correct to say that during that same period Pennsalt was considering embarking on the same kind of project, namely, the production of sodium chlorate in the east?

[fol. 1493] Mr. DeLone: I object to the form of that question. The witness has answered what Pennsalt was considering; and what Olin may have been considering in those periods, this witness is not in a position to answer because, as he said, he had no knowledge of it.

He has testified as to Pennsalt's considerations. It seems to me you are now reaching the point of argument or draw-

ing of conclusions which you are well able to handle when this case is presented in court. I don't think this is the proper subject for deposition.

By Mr. Freed:

Q. Mr. Drake, did you at any time prior to the agreement of February 11th, 1960 consider that Olin was a competitor or a potential competitor of Pennsalt in engaging in the production and sale of sodium chlorate east of the Rocky Mountains?

A. That they were a competitor, unequivocally, no. I suppose anyone is a potential competitor. I couldn't honestly say, if you asked the same question about DuPont, or Dow or Carbide that I could say potential competitor, no, I couldn't say that.

Q. Limiting ourselves solely to sodium chlorate and solely to what you knew about Olin's interest and Olin's activity [fol. 1494] in the sodium chlorate field, were you ever concerned that Olin might, by itself, enter the production and sale of sodium chlorate in the east?

A. I don't think I was because you're speaking of the period during which we were considering at least the possibility of a joint venture with Olin.

Q. I would like you to consider, sir, the entire period that we have discussed, up to February 11, 1960, when the joint venture agreement was consummated.

A. Now you're talking about the period from '53 on?

Q. Yes, sir.

A. I can't conceive that sometime during that period we, even I didn't think that it would be possible for Olin Mathieson to produce chlorate.

Q. Can you recall when it was that you did consider?

A. No, I can't. As I say, I don't recall specifically but I can't conceive at some point during that period I wouldn't have thought, well, they could produce this material.

Q. Can you recall when that thought did occur to you?

A. No, I say I don't know.

Q. You're just stating it must have?

A. I'm sure it must have at some point, just as it has occurred to me that others might produce sodium chlorate.

Q. Right.

[fol. 1495] Mr. Freed: I think now would be an appropriate time to recess for lunch to reconvene at a quarter of two.

(Whereupon, at 12:30 p.m. the taking of the deposition was suspended for a luncheon recess until 1:45 o'clock p.m.)

[fol. 1496] AFTERNOON SESSION

1:30 p.m.

Whereupon WILLIAM P. DRAKE resumed the stand and, having previously been sworn, was examined further and testified as follows:

FURTHER EXAMINATION ON BEHALF OF THE PLAINTIFF THE UNITED STATES OF AMERICA

By Mr. Freed:

Q. Mr. Drake, at the Olin Pennsalt meeting in January 1960, which I believe was held on January 21st, 1960, according to a file memorandum by Mr. Clem, who was it in the Olin organization who suggested or made the remark that referred to Olin's productive capability or efforts in the sodium chlorate field?

A. Specifically I don't know. I would guess, probably Mr. Block.

Q. Could you recall what he said; what his words were?

A. I'm afraid I would be very misleading if I tried to reconstruct it because I honestly don't remember.

Q. Can you recall the context in which it came up?

A. The context I am sure was at that meeting, specific meeting, was in relation to what Olin Mathieson had to offer as compared to what Pennsalt had to offer to a joint venture.

Q. And according to Mr. Block Olin had what to offer?

[fol. 1497] A. Well I would guess that the comment might have been made after we had said how much we know about the production of chlorate. Well, we aren't without some knowledge of chlorate ourselves. We've done some work on it. I think it is evidenced by your mention of the Doctor that they had done some work. I'm trying to imagineer

here, in a sense reconstruct a thought rather than actual words as it might have been presented.

Q. But you cannot recall specifically—

A. No, I don't.

Q. —the conversations that took place?

A. No.

Q. I believe you stated this morning that Pennsalt in late '59 contemplated that it might be able to sell 8,000 to 12,000 tons of sodium chlorate in the east over a three or four year period of sales development.

Can you state for us the time required for each of the various elements of developing that sales potential, that amount of sales on your books?

A. I wish I had such a crystal ball. I really don't know. I'm giving you an educated guess when I say that we could —or it was estimated that we could get it up to 8,000, to 10,000 or 12,000 tons.

Q. What was the problem that you—

Mr. DeLone: I don't think the witness has finished his [fol. 1498] answer.

Mr. Freed: All right, go ahead.

The Witness: Now each of the elements, what would be required in each of the elements of those sales and time-wise would depend upon a number of factors, not the least of which would be the ability of the individuals to whom you assigned this responsibility for sales. If you had to take a greenhorn why it would obviously take longer than if you had an experienced person. Conceivably you could go out and hire somebody away from somebody else that had the contacts and had the knowledge of the field, in which case it would accelerate it. It's a toughie to answer, really, to give you anything with any meat on it.

By Mr. Freed:

Q. Did you make any efforts to explore the possibility of hiring experienced sales personnel?

A. Not to my knowledge.

Q. What would a salesman have to know in order to be able to approach a pulp or paper company in the southeast to sell it Pennsalt sodium chlorate?

A. He would have to know the needs of the customer,

of the prospect. He would have to know how to cultivate that prospect in terms of generating confidence in him and his company. When I say "him" I'm speaking of the salesman now. He obviously would have to know his product and what it would do specifically for that customer or [fol. 1499] prospect.

Naturally he would have to have some assurance that if he got the sale he could deliver the material of a good quality.

Q. Did Pennsalt at this time, in late 1959, enjoy the confidence or the good reputation in the pulp and paper industry of the southeast?

A. I wouldn't say so. There would be no reason for their knowing much about Pennsalt. We are a relatively small company, as you know.

Q. I wonder if you would compare for us in your view the difference in Pennsalt's ability to sell or not to sell sodium chlorate in the southeast, and the ability of Pittsburgh Plate Glass to sell sodium chlorate?

A. I don't think I could make the comparison because I don't know much of anything about Pittsburgh Plate Glass' ability.

Q. Does your Company compete with Pittsburgh Plate in the chemical business?

A. Uh-huh.

Q. And your organization is on top of the competition and the competitive relationships insofar as Pennsalt and Pittsburgh Plate are concerned?

A. Those products which are sold by Pittsburgh Plate, the Chemical Division, I assume you're referring to, and Pennsalt are handled largely by George Grogan, who is [fol. 1500] the General Sales Manager of Industrial Chemicals East.

Q. Have you had occasion to discuss recently with Mr. Grogan what the prospects are for competition from Pittsburgh Plate in light of the announcement of its sodium chlorate plant?

A. No, no.

Q. Has this been a subject of discussion to which you have been a party within the past few weeks since your Company learned of their entry into the business?

A. There has mention been made of Pittsburgh Plate

and its announcement, that is, its announcement. I believe they said something about a 15,000 ton plant, if I'm not mistaken. I think there was an article in Chemical Week or some such trade journal about it. It wasn't Chemical Week, it was one of the newspapers.

The conjecture on our part is, how in the Sam Hill they can justify a plant of that size.

Q. And are your questions about their ability aimed at the return on investment problem or the selling problem?

A. Return on investment primarily. It's conceivable that they are so much better at producing the product that they can make a less expensive product than we can. I doubt it, but that's a possibility.

Q. How about the size of Pittsburgh Plate's chemical operation compared with Pennsalt? Are you familiar with [fol. 1501] the relative size?

A. Oh, generally. We're peanuts compared with Pittsburgh Plate Glass.

Q. In chemicals?

A. I think so, even in chemicals.

Q. Now, again, would Mr. Grogan have that information in detail about the relative size of the competitive efforts of your two companies in chemicals?

A. I don't know whether anybody can specifically indicate how much their chemical sales are. I don't recall whether their annual report breaks down their chemical sales. If it does, why any one of us could determine it. I have the general impression though that they are substantially larger than we are in chemical sales.

Some companies like Union Carbide in their annual report break it down, but others seem less inclined to do so.

Q. In the return on investment studies which your Company made of a sodium chlorate facility in the east, frequent mention is made of the possibility of borrowing 50 per cent of the fixed capital at 6 per cent.

To your knowledge, what was the basis on which those borrowing estimates were made. Who, and by that question I mean from whom could money be borrowed at 6 per cent?

[fol. 1502] A. You're talking about borrowing by a joint company?

Q. No, sir, I'm referring to the investment studies in

which the only information furnished was 50 per cent fixed capital furnished by Pennsalt, 50 per cent fixed capital borrowed at 6 per cent. There was no reference in these studies to a single or joint venture.

Mr. DeLone: Would you identify one of the studies so that we know what you mean? I do believe it would facilitate an intelligent answer to the question if the witness might see it.

The Witness: I don't recall actually any discussion of borrowing 50 per cent, that is Pennsalt borrowing. The reason for that is that the net effect would be the same as if we put all our own money in it.

By Mr. Freed:

Q. In what way would the net effect be the same?

A. Well, you would have a total investment, Pennsalt's total investment, whether you borrowed the money from a bank or if you borrowed it from your share owners, or what have you, it would still be the total investment required for the plant and the working capital, so that it would not help the return on investment any to borrow it.

Q. Perhaps it would be better for us to defer further discussion on investment return until we do hit the studies. [fol. 1503] Is it a fact, however, that Pennsalt did not attempt, prior to the time it decided an a joint venture, did not attempt to finance a sodium chlorate facility by bank funds?

A. That is correct.

Q. And is it also a fact that Pennsalt did not attempt to negotiate with any other chemical company, or any other chemical selling agent with a view toward having such third parties distribute a portion of the output of Pennsalt's contemplated sodium chlorate facility?

A. To my knowledge, no. Incidentally that sounds like an ambiguous answer, the way you worded your question. It is a fact that we did not, so perhaps the answer should be "yes" in context with your question.

Q. Thank you, sir.

Mr. Drake, turning back to the inception of Pennsalt's interest in exploring the possibility of building a sodium chlorate plant in the east, the documents furnished to the

Plaintiff indicate that consideration of this facility goes back at least to 1951.

However, I believe you testified that your position as Executive Vice President and in the top management of Pennsalt goes back to '55, and I would like to direct your attention, sir, to a document, a memorandum dated February 18, 1955 from you to Mr. Woodard, which I would [fol. 1504] like to have the reporter mark as Plaintiff's Drake Exhibit 4.

(The document referred to was marked Plaintiff's Drake Exhibit No. 4 for identification.)

In this document you quote Mr. Grogan as indicating that Pennsalt should be able to sell about 5,000 to 8,000 tons of sodium chlorate out of Calvert. Was Mr. Grogan right, as you saw it then?

A. You mean do I think this is a reasonable estimate?

Q. Yes, sir.

A. I have no reason to feel that it isn't or wasn't a reasonable estimate.

Q. At the time Mr. Grogan made this estimate, do you recall any discussions with Mr. Grogan, or anyone else in the Pennsalt eastern operation with respect to the sales potential of Pennsalt in the sodium chlorate market at that time?

A. Specifically no. I think this was undoubtedly the result of a question that was put to George Grogan, the answer to which he gave sort of off the top of his head. I don't think it's the result of any study on his part that I am aware of.

Q. In the studies which followed this February 1955 document, was it assumed that Pennsalt in fact had a sales potential of 5,000 to 8,000 tons of sodium chlorate, as you [fol. 1505] can recall?

Mr. DeLone: Isn't that something, if you're going to the studies, each study will better reflect than a general question like that?

By Mr. Freed:

Q. If you know the answer, Mr. Drake, I would appreciate your telling us.

A. I think it would be reasonable to assume that at that time with the business conditions as they existed, that, well, I would put it, there ought to be something the matter with us if we couldn't sell 5,000 to 8,000 tons. That's not saying how soon we could sell it.

Q. Do you recall any discussion with Mr. Grogan with respect to how soon this——

A. No, I don't.

Q. —this sales potential could have been achieved?

A. (Shaking head.)

Q. Do you know the users to which this estimate referred?

A. No, sir.

Q. Did any information subsequently come to light that would leave you to question the 1955 estimate as being valid at that time?

A. I wouldn't think so, no.

[fol. 1506] Q. On February 25, 1955, Mr. Grogan sent a letter soliciting sales of sodium chlorate to Champion Paper Company at Houston, Texas. The letter is from Mr. Grogan to Mr. Malcolm MacDonald, Director of Purchases of Champion.

I would like the reporter to mark this document Plaintiff's Drake Exhibit 5.

(The document referred to was marked Plaintiff's Drake Exhibit No. 5 for identification.)

A. If it won't confuse you, you could use D-11 as Drake. Perhaps you just mentioned it.

Mr. Freed: I think for means of reporting we had better continue.

By Mr. Freed:

Q. Are you familiar with that letter, sir, the letter from Mr. Grogan to Champion?

A. I've seen the letter I'm sure.

Q. You will note that in the last paragraph of the letter Mr. Grogan refers to Pennsalt's contemplated plant at Calvert City.

Do you recall the circumstances that preceded the sending of this letter by Mr. Grogan to Champion?

A. Not specifically. Again it's conjecture, but I would imagine that this was one of the many to which I have referred in the past, go-arounds we had on what we could do with sodium chlorate in the east.

[fol. 1507] It is probably an effort to determine whether we could get and begin to build some tonnage. I think this was being sold out of the Portland plant, as I recall it. You will notice, I think, as I recall it, this indicates that we were only interested in the Houston plant. The Canton plant was a little far afield economically from Portland.

Q. Do you recall whether this letter was written as a part of a decision to exploit your sodium chlorate sales potential east of the Rocky Mountains?

A. I would say it was more of an exploratory effort than it was the exploitation of something which we actually didn't have.

Q. Can you recall any other efforts taken at the same time to explore your sodium chlorate market potential?

A. Again specifically, no, no, I don't.

Q. Is the reference here to the contemplated plant at Calvert City a reference which was made as a result of any decision by management to suggest to the paper industry that Pennsalt was about to embark, or was seriously considering embarking on a sodium chlorate eastern production facility?

A. Again I would say that this undoubtedly was an exploratory effort to determine what we might be able to do in the marketing of chlorate in the east.

[fol. 1508] Now the reference to a contemplated plant at Calvert, I'm fairly certain was undoubtedly to give some indication to the prospect that—and that's why I said contemplated plant—that if we were able to develop enough business to warrant it economically, why we might build a plant a Calvert City, which I think is very definitely in line with this whole area from the '50's on, of again saying, why can't Pennsalt justify a plant in the east.

Q. Beginning at least as early as the date of this letter, did Pennsalt put forth its best efforts to develop a sodium chlorate market potential east of the Rocky Mountains?

A. I'm afraid I would have to answer that, no.

Q. Can you explain your answer, sir?

A. It harks back to what I said this morning about the

relative emphasis that was placed on marketing and the technical phases of our business during this and prior periods. I am not sure until later in the 50's that we really came to grips with the marketing end of chlorates in the east. I mean, it was sort of a drib and drab type of thing and I think this is a good example of it. It isn't the ideal way to do it, incidentally, but nevertheless I think that's the way it was done and that's why I used the word "unfortunately."

[fol. 1509] Q. Turning now, Mr. Drake, to a memorandum written by you to Mr. H. C. Land on March 23, 1955, which the reporter will mark Plaintiff's Drake Exhibit 6.

(The document referred to was marked Plaintiff's Drake Exhibit No. 6 for identification.)

A. May I take a gander at that?

Q. Certainly.

(Handing document to the witness.)

Mr. Freed: I might say for the record that those exhibits which the Plaintiff shows to this witness and any succeeding witnesses may, in many cases, have markings in either red pencil or black pencil. We would hope that by agreement with the counsel for the parties that by the time of trial we would be able to have a set of documents that were free and clear of any extraneous markings, and for the time being the markings will only be for the purpose of aiding the witness in focusing on the specific portions.

Mr. DeLone: I would certainly trust that before any of these documents are used the markings which are of counsel will be removed from them.

By Mr. Freed:

Q. Directing your attention, Mr. Drake, to the second paragraph of this memorandum, the statement is made by you to Mr. Land:

"Knowing that you have coming up fairly substantial [fol. 1510] demands for sodium chlorate to the paper industry, I imagine you will want to make arrangements with Fred Shanaman or with someone else if he doesn't have it available, to supply those requirements."

I wonder, Mr. Drake, if you could tell us about the fairly substantial demands for sodium chlorate to which you were referring?

A. I certainly draw a blank on that.

Mr. DeLone: I take it from your answer you don't know; is that right?

By Mr. Freed:

Q. Can you recall where you might have gotten the information at this time concerning fairly substantial demands?

A. My difficulty is that I don't know what I meant by fairly substantial, for one thing, and secondly, I don't know where it was, where the demand was, I mean more specifically than what is stated here. That's the part that——

Q. Are there any records in your own files or in Company files that might enable you to go back to the time when you wrote this memorandum and when these demands were fairly fresh in your mind to determine just where they were and how large they were?

A. The most I can say on that is that this may have tied in with a prior note, I think it was prior, the one of the [fol. 1511] Champion, was it, the paper company there in Houston and Canton. I may have been thinking in terms of fairly substantial as, oh, a couple thousand tons a year or some sort like that. I don't recall anything. I think I should if I had my wits about me, recall any really substantial, or substantial in terms that we talk about it today, demands. The most I can reconstruct here is that this may well have referred to the one or two efforts that we were endeavoring to make for exploring this field.

Q. The only effort that we have a record of so far is with Champion.

Can you recall who the other accounts might have been?

A. No, I don't.

Q. Do you recall whether Champion responded favorably?

A. I don't even remember whether they bought any material. That is the irritating part of it.

Q. When you referred to demands, do you usually refer

to a demand by a customer to Pennsalt, or would you ordinarily have something else in mind?

A. Oh, I think you usually refer to demand as a market demand. Perhaps demand is not as good a word as potential, rather than demand. I think the upshot of it is, I don't recall that anything ever developed substantially here as a demand or a requirement.

[fol. 1512] Q. At the time you wrote this memorandum, as you can judge by the language that you used, is it your testimony that there likely were demands from particular customers, or that this was simply a promotional effort on your part of more solicitation by Pennsalt in the sodium chlorate industry?

A. My guess would be that after a discussion, one of our numerous ones, of why we couldn't do something with chlorates in the east, probably with Hugh Land, we agreed that we would go ahead and see what could be done to develop a market; how much of a job it would be to do it.

I think an example of it is the effort with the Champion organization. Apparently not too much developed from it, because I certainly don't recall that any great potential was unearthed for Pennsalt at that time.

Q. Does your company normally maintain records to show the requests of customers for particular products?

A. I would think that probably would be one of the first files that would be disposed of as irrelevant on the part of a secretary in her general concern about how much room she has got in her files.

Q. Would the files, at least back in March of 1955, ordinarily no longer be available in your company?

A. I can't say really; ordinarily I don't know. It's conceivable, though, that that would be one of the things that [fol. 1513] they wouldn't hang onto, particularly would that be so if we made a study and again, as we did so many times, decided not to do anything about it.

Q. If the company still maintains records to back up your statement here of fairly substantial demands, where in the company would those records be?

A. Oh, they could be either in the Industrial Division East—probably that's where they would be if they would be anywhere.

Q. If those records are not available today or if the records which are available fail to disclose the basis for your statement here, you have no present recollection of the events and the contacts with customers and the conversations within the company which led you to write this particular memorandum to Mr. Land, is that correct?

A. Honestly, I don't. I think you might be able to get a clearer picture of that possibly from Land or Grogan, who will obviously be closer to it.

Q. Do you have any recollection, sir, of the result of this memorandum, of the action, if any, taken by Mr. Land?

A. No.

Q. I direct your attention now, sir, if I may, to a memorandum dated April 28, 1955 from A. S. Woodard to G. A. Grogan, which the Reporter will mark Plaintiff's Drake Exhibit No. 7.

[fol. 1514] (The document referred to was marked Plaintiff's Drake Exhibit No. 7 for identification.)

This document, sir, which I will show you in a moment, refers to a letter that had previously been addressed to you and talks of a review which has been directed towards determining the possible return to Pennsalt Company where the fixed investment provided by a second party at a nominal rate of return, and 6 per cent is referred to there, and I wonder if in inspecting Exhibit No. 7 you can recall the circumstances which led you to direct that review on those particular terms?

A. The only thing that I can think of that that might refer to is that we may have been thinking of the possibility, even at this stage, of a facility for chlorate which could be converted in whole or in part to perchlorate as meeting the demands of one of the companies like Aerojet or one of the others where at that time they estimated they would require, I think it was about this time, that would require substantial quantities of perchlorate.

Again I am trying to—this is in part conjectural. It is conceivable that we thought, well, now if we could get Aerojet to invest or lend money to this project possibly we could work it out so that we could justify the plant and in turn satisfy some of their needs.

To my knowledge it was never pursued further than just [fol. 1515] this stage of the investigation.

Q. Is Aerojet the only company that you are testifying might have been in your mind at that time?

A. It's all I can think of. There may have been others, but I cite that as an example because I know there was a flurry for a while of contemplation of Aerojet requiring substantial quantities of ammonium perchlorate.

Q. Were there any discussions held with Aerojet, as you recall?

A. I don't think so. Now, there may have been on the West Coast, but not in conjunction with this.

When I say there may have been on the West Coast. I am sure that our people working out of Tacoma have had numerous contacts with Aerojet, that is, particularly since we have been producing perchlorate up there.

Q. Exhibit No. 7 refers to a possible return on an investment of between 40 to 60 per cent, if the other estimates in the document are borne out; can you recall specifically why this wasn't acted upon?

A. In the first place, I am sure that our financial people said I was cockeyed to think that that would be the kind of a return that you could get on a project where you were merely borrowing money for Pennsalt.

I can hear them now saying, "You're just kidding yourself." It's money available to Pennsalt. The return on the [fol. 1516] project is the same whether you borrow it at 6 per cent or whether you invest it as funds which we already have available.

Q. When you say you can hear them now, are you again simply speculating on the response, or can you specifically recall?

A. I am speculating on the response.

Q. In the early part of 1956, do you recall receiving from Fred Shanaman an appropriation request for the expansion of your sodium chlorate plant in Portland?

A. I think it was about that time. We had several in the Northwest.

Mr. Freed: I would like the Reporter to mark this document Plaintiff's Drake Exhibit No. 8.

(The document referred to was marked Plaintiff's Drake Exhibit No. 8 for identification.)

By Mr. Freed:

Q. I would then ask you, Mr. Drake, if you can recall the sales basis on which Mr. Shanaman requested expansion of the plant from a capacity of 7,848 tons to 10,560 tons per year?

A. In the first place, this is an incremental expansion, you know. It undoubtedly is based on projections that Fred Shanaman made for additional sales to the pulp and paper industry in the Northwest. It may have also been included [fol. 1517] in an effort which was then beginning, or I guess had been underway even at that time for the use of sodium chlorate in the uranium industry.

There are several companies, the names of which I fail to remember at the moment, up in the Northwest which were interested in fairly sizeable quantities of sodium chlorate. I am speaking now of the uranium industry, and my recollection is that this undoubtedly in part at least tied in with that demand as well as a gradual growth of the pulp and paper industry.

Q. Can you recall whether any portion of the increased capacity was for the purpose of producing sodium chlorate to be used for further exploration of the eastern market?

A. Specifically, no, I don't think so.

Q. If sales for that purpose had been contemplated, would they ordinarily be a basis for the expansion of a plant?

A. For exploratory work, I wouldn't think so.

Q. Do you recall, Mr. Drake, whether that particular expansion was approved at that time?

A. I think it was. We had several in there, in that period.

Q. Do you recall, sir, a discussion in the latter part of June 1956 with Mr. George T. Collins with reference to the possibility of locating a sodium chlorate plant in Puerto Rico?

[fol. 1518] A. Yes, sir.

Q. Do you recall any other people being present during that discussion?

A. No, I don't. George Collins, knowing of our interest

in chlorate in the east and our desire to supply in the east, and George Collins, having way back in the history of the company been Head of Market Research—this is some years back—and then at that time having been in charge of the International Division as well as being an imaginative individual, proposed that as a solution to our efforts to put a plant in the east: might we not consider Puerto Rico with its tax advantages, its proximity to the southeast?

I think he went so far as to determine power rates and possibly even salt costs for Puerto Rico.

In that light, most of the other proposals on sodium chlorate in the east died its natural death.

I think one of the reasons, undoubtedly—I don't recall the return on investment figures at the moment, but to supply the southeast from an offshore plant location, to my mind, wouldn't be ideal, and undoubtedly there are other reasons for not giving it much thought.

Q. Was any consideration given at this time to the ability of Pennsalt to market the output of such a plant, if it were feasible to construct, and profitable to construct one? [fol. 1519] A. I think, as I indicated this morning, really the only time that I know of that we would come really to grips on Pennsalt's ability to sell chlorates in the east was when we started our program in '57 to decide once and for all whether we were going to fish or cut bait, as I expressed it.

Q. In other words, the efforts prior to 1957 were solely economic evaluations; beginning in 1957 you began to take into account the problem of selling what you produce. Is that correct?

Mr. DeLone: I don't think that is a fair statement. In light of all the testimony on the subject, including references earlier which he has already covered about some exploratory efforts and particularly the document that you have shown the witness, I don't see how you can try to capsulize all that testimony into a conclusion like this, which is inconsistent with what has gone before.

By Mr. Freed:

Q. Directing your attention to the question of estimating Pennsalt's market potential, Mr. Drake, was there a time prior to 1957 when in your recollection the company carefully appraised its ability to sell sodium chlorate in the east?

A. In my estimation, prior to the study in '57, and I [fol. 1520] can be wrong on this, but in my estimation the efforts on the part of Pennsalt to determine whether or not we could sell in the southeast were rather feeble.

They certainly were inadequate.

Q. Toward the end of 1956, Dr. LaLande addressed a memorandum to you dated November 20, 1956, which states as follows:

"Because of other assignments, we have not yet started an analysis of this product"—subject of the memorandum is: "Sodium chlorate—Puerto Rico"—"your comments on its relative importance would help us in scheduling our work."

I would like the Reporter t mark that document Plaintiff's Drake Exhibit No. 9.

(The document referred to was marked Plaintiff's Drake Exhibit No. 9 for identification.)

A. That's all there was in the memorandum, wasn't it?

Q. I wonder if you can recall your response to Dr. LaLande with regard to relative importance of the project?

A. I don't think we ever made it. I don't think he ever went through with an analysis of the project. I don't recall it. If he did, I certainly didn't give it priority, because of the point I made with you earlier.

Q. Do you recall discussing with Dr. LaLande the "relative importance" that you placed on the Puerto Rico [fol. 1521] project?

A. Specifically, again, no, but in light of what I have said earlier and what has transpired since, I am fairly certain that I said either, forget it, or, don't give it too high a priority.

Q. What were the reasons for that decision?

A. Again, primarily I think we made some preliminary studies of salt costs and power costs, plus the fact that this being an offshore operation didn't appeal to me.

Q. On December 17, 1956 you sent a memorandum to Mr. Shanaman commenting on a newspaper announcement that morning of Hooker's expansion of its Mississippi plant.

I would like the Reporter to mark this Plaintiff's Drake Exhibit No. 10.

(The document referred to was marked Plaintiff's Drake Exhibit No. 10 for identification.)

Do you recall reading the announcement of the Oldbury expansion?

A. I recall the memorandum very vividly. I referred to it this morning as this is what sparked our deciding to take a last look at sodium chlorate in the east.

Q. In other words, it was this announcement that triggered the serious study that Pennsalt undertook?

A. Right.

Q. Focusing your attention on the situation in the latter [fol. 1522] part of 1956 when, as indicated by this memorandum, Hooker had twice expanded or planned expansion of its then existing plant by a total of 10,000 tons, can you compare for us Hooker's ability to anticipate the sale of 10,000 tons, 10,000 additional tons of sodium chlorate as against the ability that Pennsalt might have had at that time?

A. I think very easily Hooker—I think, as you have indicated, this was an expansion, they were already established—I think it was Aberdeen, Mississippi, as I recall the location of the plant—they obviously had distributing facilities established, so they were talking about taking an already existing marketing group and expanding the efforts of that group, which, just like an incremental expansion of a plant, is much easier than building a whole new facility or starting with a new marketing group.

I think in that respect, the contrast is quite clear.

Mr. Freed: I wonder if we could take a five minute recess now.

(Recess.)

By Mr. Freed:

Q. Mr. Drake, with reference to your last answer concerning Hooker's advantages over Pennsalt in terms of selling the 10,000 tons of capacity then being added, were Hooker's advantages any different than those advantages [fol. 1523] which your company would encounter any time it was attempting to break into a field or a market in which other producers were already selling, that your company had not previously served?

A. I think I in part, at least, answered that question with the advantages that I stated accrued to Hooker being already established there with the marketing group. It was an extension of their marketing group rather than the creation of a new one, plus the fact that they were already recognized in the area as a producer and supplier of chlorates.

I think that is a distinct advantage.

Q. My question, sir, was directed to determining whether that advantage which Hooker had over you is any different than the advantage which an existing producer always has over a potential or an interested entrant?

A. I don't think it was any different.

Q. Is it true then that the risks which Pennsalt would face in attempting to compete with Hooker in the eastern market in the latter part of 1956 were the same risks which a newcomer normally can expect to encounter, the risks of competition when he tries to break into a market which is already served by other producers?

A. As a general statement, I think that is correct.

I think there are many factors, however, that determine the degree of risk such as the timing, the market potential, [fol. 1524] just to cite a couple.

Q. In response to your memorandum to Mr. Shanaman commenting on the Oldbury announcement, Mr. Shanaman wrote you on December 20, 1956 a document which the reporter will mark as Plaintiff's Drake Exhibit No. 11.

(The document referred to was marked Plaintiff's Drake Exhibit No. 11 for identification.)

In this memorandum Mr. Shanaman refers to the fact that:

"It has been an acknowledged fact that we perhaps have as much advanced information concerning the manufacture of sodium chlorate as anyone else."

At that time, was this true, did Pennsalt have as much advanced information on sodium chlorate manufacture as anyone else?

A. That was purely conjectural on Fred's part. He naturally felt that way because he had been responsible for producing chlorate.

Q. In terms of Pennsalt's reputation in the industry at the time, did you have any knowledge when you received this memorandum of Pennsalt's reputation insofar as sodium chlorate manufacturing technology was concerned?

A. No.

Q. In his memorandum to you, Mr. Drake, Mr. Shanaman [fol. 1525] suggests the creation of a committee to investigate the sodium chlorate production and marketing capabilities of Pennsalt, and he makes the remark in the next to the last sentence of the memo:

"Of course, it could be that we have been seeking a much higher return for our dollars invested by comparison with the rate our competition has been willing to accept."

Do you have any comment on that observation which I have just quoted by Mr. Shanaman?

A. Yes, simply this: that Mr. Shanaman in making that statement is no different than any other division manager or individual, for that matter, who has proposed a project a number of times and had it turned down on the basis of its inadequacy in terms of return on investment.

It's a very logical question for the proposer to raise. Unfortunately he can't decide whether it's an adequate investment, whether, the return is adequate or not. I have to do that.

Q. At the time Mr. Shanaman made this observation to you, what was his position in the company?

A. He was the Vice President of the Company, a Member of the Board of Directors, and Head of the Western Division, and he was President of the Western Division. I think it was still then a wholly owned subsidiary.

[fol. 1526] Q. Was Mr. Shanaman privy to the investment policy and the application of that policy by Pennsalt?

A. I want to be sure I understand what you mean.

Q. Was Mr. Shanaman in a position to know what the investment policy of Pennsalt was and what the manner was in which Pennsalt applied that policy in various projects?

A. Yes, sir.

Q. In light of Mr. Shanaman's position, was his question no different than that of any division manager who was simply in the ranks of the company and was not a member of the board and of top management?

A. Certainly his question raised in light of his position in the company bore considerable weight. I would say no greater weight however than I would place on any division manager, even though the other division managers may not have been members of the board of directors or even officers of the company.

He at that time, I would add, was also a senior, considerably senior to the rest of us in age.

Q. At the time Mr. Shanaman made this statement, was his thinking on the matter of return on investment generally out of accord with that of the rest of the board of Pennsalt?

A. May I answer that in terms of, out of accord of the rest of the management of the company rather than the board?

[fol. 1527] Q. Oh, certainly.

A. The reason for that being that the board in the way we are so constituted doesn't really get in too deeply in the matter of return on investment, to the same degree at least as the rest of the management group does.

Q. May I interrupt you there, Mr. Drake, simply to ask if you would define the management group in terms of the the individuals who were members of it at this particular time?

A. We have had, starting in about '55, what we call a Management Council which consists of the heads of the operating divisions of which Mr. Shanaman was one, and the heads of the staff departments such as financial, technical, personnel and the like. That is the group that has really been responsible for the operations of the company.

You will notice that I used the term "Council," and they serve as that to the President.

Q. I appreciate your explanation of the management group, but now I wonder if you can go back to the original question about the relationship between Mr. Shanaman's attitude toward the return on investment policy and that of the other members of the Council.

A. Fortunately we have a divergence of opinion among the Council members. It would be very unfortunate if we [fol. 1528] didn't. By and large, I wouldn't say that he was not in accord to any greater degree than any other specific individual on the Council on a specific matter.

When I say a "specific matter," he is referring here to sodium chlorate which was one of his babies and he would have liked to have seen it expand.

Q. Do you recall having any discussion with Mr. Shanaman about this particular observation?

A. No, I don't.

Q. Addressing yourself to the substance of his remark that:

> "It could be we have been seeking a much higher return compared with our competition"

can you comment on that?

A. Yes. If you were to look at the return on investment of Pennsalt compared with those companies with whom we compare ourselves regularly in this matter of return on investment on return on shareholders' equity, which is what we use more, you would find that over the years Pennsalt had lagged behind the return on investment of most of our competitors.

When we had our change in management in 1955, one of the objectives that we established for ourselves was to improve that return on investment or return on shareholders' equity. I am happy to say that some slight improvement has been made.

[fol. 1529] You must recognize, however, and I think this has a real bearing on this whole subject of Pennsalt's interest in the sodium chlorate field solely or jointly, that we are still lagging behind the average of our industry in terms of return on shareholders' equity, although we are making some progress to narrow that gap.

So long as we have projects coming before us which meet the criteria for investment and there is a demand for dollars within the company for these various projects, those that don't meet the criteria naturally will fall by the wayside, usually.

Until we run out of projects, and we are far from it, I see no reason for deviating from our investment policy as a general statement.

Q. Who were the companies with which Pennsalt compared itself on the matter of return on investment?

A. I would refer you to return on shareholders' equity; it's a better reference, I think, because we have to keep our figures that way.

There are, I think, about 17 in number. I don't know whether I have the latest one here or not (producing document).

Perhaps, to save time and so on, the best thing would be to give you this list, if you want it. It shows the return [fol. 1530] on shareholders' equity for each of these companies from 1950 on through 1960. It shows the averages and it is grouped in those companies with sales under 100 million, those with sales of 100 million to 400 million, and those with sales of over 400 million.

As you can see from this, even with Pennsalt's improvement, which in 1960 came up to 8.0 per cent, the average of the other companies still was 11.0 per cent.

It may be significant also to comment that at about the time Mr. Shanaman made the statement to which you refer in his memorandum of December 20, 1956, our return on shareholders' equity for the previous year, which was the last figure we had, was only 6.8 per cent.

Furthermore, we had a very heavy investment program facing us and we recognized, even in 1956, that in 1957 our return on shareholders' equity would be even less than the figure I just gave you; in fact, it went down to 5.6 per cent.

I think with that background you can perhaps more clearly understand why we were not about to reduce our requirements for investment, particularly in light of the number of projects that we had available on which we could meet the investment criteria.

Q. Might we, for convenience, in order to avoid going [fol. 1531] through the list on the record, might we mark

that as Plaintiff's Exhibit No. 12 or Defendant's Exhibit No. 1?

Mr. DeLone: I have no objection.

(The witness handed the document to Mr. Freed.)

Mr. Freed: I would ask the Reporter to mark Mr. Drake's paper as Plaintiff's Drake Exhibit No. 12, which is identified by the title: "Net Return on Shareholders' Investment —Pennsalt versus Competition", and there is a date in the lower lefthand corner of 5/3/61.

(The document referred to was marked Plaintiff's Drake Exhibit No. 12 for identification.)

By Mr. Freed:

Q. Mr. Drake, when you use the term "return on shareholders' equity", does the percentage figure for that designation correspond precisely to the figure we have been using today, "return on investment"?

A. No.

Q. Is there a conversion that we can use in order to translate a return on investment of 30 per cent to a per cent of return on shareholders' equity?

A. Not readily, no.

Q. No?

A. You can't take an individual project and relate it to shareholders' equity; that's why we use the return on investment as the yardstick, but if you have enough projects [fol. 1532] which meet the return on investment requirements, it will automatically bring up the return on shareholders equity.

Q. But in order to follow up Mr. Shanaman's observation to you in Exhibit 11, is there any way in which we can determine whether the rate of return required by Pennsalt in connection with its sodium chlorates study was higher or lower than that of the competitors listed on Exhibit 12?

A. No, no. This is purely conjectural on Fred's part. He is raising the question, actually. I would say one thing further, that I am not concerned with what our competitors' criteria are. We are responsible for Pennsalt.

Q. Do you know whether Pennsalt in its sodium chlorate project was insisting on a return on investment that was

higher than that which its competitors were receiving or had projected in their own sodium chlorate undertakings?

A. Specifically, no.

Q. Do you have any information that would reflect on a comparison of Pennsalt's return on investment in sodium chlorate in the east and the return of its competitors?

Mr. DeLone: Could I have that question back?

(The reporter read the question.)

Mr. DeLone: If you understand it. I'm afraid to say I don't.

[fol. 1533] The Witness: Well, it's very easy to answer it, no.

By Mr. Freed:

Q. At the time Mr. Shanaman wrote his memorandum of December 20, was Mr. Land a member of the Management Council?

A. Yes.

Q. I refer you next, sir, to Mr. Land's memorandum to you dated December 20, 1956, referring to Mr. Shanaman's memorandum.

Would the reporter mark this as Plaintiff's Drake Exhibit 13?

(The document referred to was marked Plaintiff's Drake Exhibit No. 13 for identification.)

Mr. DeLone: I think you said dated December 20th, it was December 27th.

By Mr. Freed:

Q. In the first line of Exhibit 13, Mr. Land states that he agrees that:

"I agree wholeheartedly with Mr. Shanaman's comments of December 20th."

Can you recall having any discussion with Mr. Shanaman, Mr. Land or anyone else concerning the particular observation of return on investment that we discussed a little while back, solely with reference to Mr. Shanaman?

[fol. 1534] A. I am sure that in the meeting we called early in January of '57 to discuss this whole matter, undoubtedly the subject of return on investment policy came up. Specifically I don't recall any discussion with Shanaman or Land singly or together on that one subject.

I think it might be well to also observe, at least, that in agreeing wholeheartedly with Mr. Shanaman's comments of December 20th, I would construe this to mean that primarily he was agreeing that we either ought to determine why we can't do it and correct the reasons why we can't do it, or forget about it. And I am not referring solely to the policy on return on investment. In fact, I think that was a minor point in Mr. Shanaman's memorandum. He raises it, it's a conjecture on his part. Possibly, I think is the wording, our return on investment is higher than our competitors. I think the gist of his memorandum and that to which Land agreed was, let's get on about this whole subject of sodium chlorate.

* * * * * * *

[fol. 1535] Q. Mr. Drake, I believe that you testified this morning that it was not until early in 1960 that you heard that Olin had been contemplating the construction of the sodium chlorate plant in the east, and I wonder if you would reconcile for us that testimony—if I have recapitulated it correctly—with the statement which Mr. Land made in his memorandum to you in the latter part of 1956?

A. Not having the benefit of the discussions between Olin and whoever it was in Pennsalt who discussed this in [fol. 1536] 1956 it would be very difficult for me to reconcile the two statements, other than to say that obviously, as is indicated in here, there must have been a discussion on the general subject of building a chlorate plant in '56, as reported here.

Apparently I did not attach enough significance to it to have it make an impression on me, and hence my answer this morning. I still don't know what the gist of the discussion on building a chlorate plant was, and I think an elaboration of that would be necessary before I could attempt to reconcile the two statements.

Q. As you read this particular sentence, sir, does it con-

vey to you a conversation between someone in Pennsalt and someone with Olin, which conversation involved an exchange of data between the companies with regard to cost figures, capital and manufacturing?

A. As I say, without knowing what that discussion was I really can't. I think it would be improper to conjecture just what that conversation was.

Q. I would like next to refer to a memorandum dated January 22, 1957, W. Cooper Willits, W-i-l-l-i-t-s, to Dr. LaLande entitled, "Sodium Chlorate in the East".

I ask the reporter to mark this as Plaintiff's Drake Exhibit 14.

[fol. 1537] (The document referred to was marked Plaintiff's Drake Exhibit No. 14 for identification.)

Does Exhibit 14, Mr. Drake, reflect your recollection as of January 1957 on the question of the consideration at that time of a joint venture between Pennsalt and Olin as suggested by Point No. 3 in the document?

A. Yes, I think that's correct.

Q. Could you tell us what the discussion was at this meeting in your office with reference to the subject of a possible joint venture with Olin?

A. Well, again, in the exact words used obviously not. It's equally obvious, however, that in an appraisal of our position, as it is obvious to you, it stems from these prior memoranda to which we have just been referring. Olin Mathieson undoubtedly was suggested as a potential joint venture partner.

You will notice that it first states, however, that if a plant cannot be justified in accordance with our capital investment policy, either alone or jointly with a partner such as Olin Mathieson. I think it's important that the first there is alone and the other is an alternative, and my recollection is that Olin Mathieson was cited at that time as an example of one who might be a logical partner in a joint venture if we couldn't justify it on our own.

* * * * * * *

[fol. 1538] Q. Again with respect to item 3 in this memorandum, Exhibit 14, why was reference made to jointly

with a partner, such as Olin Mathieson, as opposed to the other possibility of jointly with a partner such as a bank, or the possibility of borrowing money from a financial source? Why was the possibility of outside financing not considered?

A. Very simply. The leverage that you have got in a joint venture where each partner puts in a minimum of capital and borrows as much as the joint venture can borrow, usually from a bank or an insurance company, that leverage gives you a return on investment on your equity which, in the case of the present Penn-Olin, is roughly a million and a half dollars each, rather than three and a half million dollars each, which would be the case if you had a joint venture and each put up half of the cost.

Now if we were to borrow the money from a bank at six per cent, the total investment would be on our books, the total seven million dollars, and we would estimate our return on investment as the seven million dollars investment rather than a million and a half dollars, which is our investment under the Penn-Olin arrangement.

Q. Is this practice of reflecting the entire capital investment both from company funds and from bank the con-
[fol. 1539] ventional way of corporate financing?

A. Yes, I think that the Internal Revenue Service, and certainly the accounting people, won't—I'll put it the other way—insist that you show the total investment on your books, even though you have borrowed a portion of it. In a joint venture, however, where the joint venture borrows the money, it not being a wholly owned subsidiary, it is not required to show those borrowed funds on the consolidated statement of the company, that is the parent company or companies.

I am sure you can get a clearer understanding of that from a person who is an accountant. I am not.

Q. In order to make the record to be clear, or for counsel for the Government to be clear with respect to your last answer, sir, I wonder if we could jump ahead to some attachments to a report which is a memorandum from A. S. Woodard to Dr. LaLande, dated October 31, 1958, labeled, "Sodium Chlorate—Sodium Perchlorate—Calvert."

Perhaps in order to speed things along, I will ask the reporter to mark this Plaintiff's Drake Exhibit 15.

(The document referred to was marked Plaintiff's Drake Exhibit No. 15 for identification.)

Exhibit 15 is a two-page memorandum with six pages of [fol. 1540] attachments.

If you will direct your attention to Table 1, which is premised on a 30,000 ton sodium chlorate plant, 100 per cent Pennsalt capital basis——

A. All right.

Q. —you will not that on line 5 there are given a number of percentage returns on total investment. If you then turn to Table No. 4 premised on the same size plant with 50 per cent of Pennsalt fixed capital and 50 per cent borrowed at six per cent, you will note that there are figures given under Item 7, for return on investment, where the 12-year average return is several percentage points higher, namely 17.1 per cent under Table 4 compared with 13.3 per cent under Table 1.

A. Right.

Q. I wonder, sir, simply using those figures as an example, if you would enlighten us as to why it would not be more desirable, why Pennsalt could not consider borrowing some of the capital required from a bank or other lending institution in order to secure a higher rate of return?

A. First I will repeat, I am not an accountant and I will add also that Mr. Woodard is not an accountant. My understanding of accounting principles, however, is that this would not hold water in terms of return on investment. Now I may be wrong but that is my understanding.

[fol. 1541] Mr. DeLone: When you say "this would not hold water", what are you indicating?

The Witness: Trying to say that the return on investment, because we borrowed 50 per cent of it at six per cent would be greater than if we had all of our own money in it. Now we're talking about gross investment and gross investment is the amount of funds available to the management of a company, from whatever source it is available, with which they are judged, or on which they are judged, as to their ability to show an adequate return. The availability of funds borrowed is no different than the availability of

funds which you may have generated from your cash accumulation and invested in this project.

This is on the basis of return on investment. I'm afraid that is all I can state on that subject.

By Mr. Freed:

Q. Mr. Drake, to go into this a bit more, is it correct that if a project costs $7 million and Pennsalt determines to put up half of that money from its own capital funds and borrows the balance from a bank, that Pennsalt will have remaining to it three and a half million dollars in its capital funds for other investments, a situation which would not exist if it put up all the money itself?

A. Your statement is an accurate statement.

Q. Then taking the next step, doesn't the borrowing of [fol. 1542] capital funds from a lending institution enable Pennsalt to engage in more ventures with its own capital dollars than it would if it didn't borrow?

A. What you're saying is that if a company has borrowing power it can do more things than if it doesn't have any borrowing power.

Q. Is that a correct statement, sir?

A. Certainly.

Q. Where Pennsalt undertakes to engage in a $7 million venture by putting up half of the funds from its own treasury and putting up the other half by borrowing at six per cent from a bank, isn't Pennsalt's total dollar outlay for that project less at the time that you embark upon the venture than it would be if you put up all the funds?

A. You're speaking of that specific venture again, yes, your statement is accurate.

Q. Can you enlighten me as to why consideration of a partner in the form of a bank does not enable Pennsalt to secure a greater return on the amount of cash that it puts out for a venture than would be true if it put up all the money itself?

A. I'll try to enlighten you and I emphasize the "try". If you're talking about a specific venture, as I've said in answer to your two previous statements, your statements are correct, as far as I understand it. And if you only have [fol. 1543] one project for a company, that could hold.

If you have more than one project, however, and demand for more money than is represented by that one project, the yardstick you use in evaluating the benefit to Pennsalt from one project versus another has to assume that your borrowed funds are put into the pot, and the total of your accumulated funds and your borrowed funds are then allocated to specific projects in terms of the total investment in that project. It has to be that way.

Q. I refer you next, Mr. Drake, to a memorandum dated February 21, 1957 from you to Dr. LaLande, which the reporter may mark Plaintiff's Drake Exhibit 16.

(The document referred to was marked Plaintiff's Drake Exhibit No. 16 for identification.)

This memorandum, sir, and correct me if my interpretation is incorrect, indicates that American Potash was planning to build a new sodium chlorate plant at Aberdeen, Mississippi.

Do you recall any conversation that you had with Mr. Shanaman when this information came to your attention with respect to the effect on your own sodium chlorate plant study at this time?

A. The only thing I recall was a certain degree of gnashing of teeth among Messrs. Shanaman, Drake, et al that they had gone ahead with a plant in an area in which we [fol. 1544] were contemplating putting a plant.

Q. Can you illuminate the record as to why Am-Pot, in your view, was able to build a new plant in the east but Pennsalt had found itself unable to do so?

A. That's the very question that we had raised back in the earlier stages when, I think, the question was almost verbatim, what is the matter with us? How can these other people do it and we can't?

Q. The previous question of this kind was with reference to the expansion of Hooker's plant in Aberdeen, Mississippi.

A. Yes.

Q. And I believe your answer at that time referred to the fact that Hooker was already an established producer in Mississippi?

A. That's right.

Q. And was simply expanding its own plant.

It is not correct that American Potash was, as indicated in Exhibit 16, planning to enter the eastern market where it had not previously had a plant located?

A. I think that is quite obvious.

Q. And in terms of the relative abilities of your company and American Potash at the beginning of 1957 to enter competition in the eastern part of the United States in sodium chlorate, can you give us any indicia of comparison [fol. 1545] between the companies that would explain why American Potash could undertake this and why Pennsalt apparently could not?

A. Nothing other than that their sales people must have felt they could sell it and our sales people didn't feel that they could sell it.

Q. If we wish to compare this selling ability of American Potash and Pennsalt in early 1957 in the southeast, would Mr. Grogan be the best witness from Pennsalt or is there someone else in your organization who would have that information?

A. Since Mr. Grogan is responsible for the sales of Pennsalt's industrial chemicals in the east I would think he probably would be the most prejudiced individual that you could touch upon.

Q. But in terms of your own knowledge, can you explain, can you give us any reasons why American Potash was able to realize its competitive aspirations in this market but Pennsalt was not?

A. Possibly American Potash was willing to take a gamble more than we were. That's a matter of business judgment.

Q. And when you speak of "gamble", sir, what would the elements of that gamble be?

[fol. 1546] A. An element, obviously, as I recall it, that that plant is 27,000 tons—is that what that figure was?

Mr. DeLone: That particular memo I don't have. Does it mention it?

Mr. Freed: There is no mention of size in Exhibit 16.

The Witness: As I recall it, the plant is, or the original plant—this is merely recollection—was of that magnitude, and apparently they felt that they could see their way clear over a period of years to build up that capacity, and were willing to wait until that time to do it.

By Mr. Freed:

Q. And faced with the same facts Pennsalt was not willing to do it; is that correct, sir?

A. That's assuming the facts are the same.

Q. Assuming that the market area is the same and assuming that each company had the same opportunity to explore the characteristics of that market, this venture on the part of American Potash represented a decision to go ahead in an area in which Pennsalt did not make a decision to go ahead?

A. That's right.

Q. Made a decision not to go ahead.

A. The only other factor I can think of offhand that [fol. 1547] might influenced their thinking and given them greater encouragement was the fact that they, as you probably know, have been operating an ammonium perchlorate plant for the United States Navy at Henderson, Nevada. Again, chlorate is converted to perchlorate. It's a raw material, in a sense, for perchlorate.

They may have had knowledge which we don't have available or didn't have available at that time to the effect that the demand for perchlorate was going to increase, they having a closer relationship with the Navy, obviously, because of the nature of their operation.

This is purely conjecture but it is conceivable, at least, that that may have added strength to their backbone to go ahead with the plant, whereas we didn't have that.

I emphasize again, however, that is purely conjecture.

Q. Was the American Potash announcement a discouraging factor or a goading factor, as far as Pennsalt was concerned in its own sodium chlorate study?

A. We don't get easily discouraged. I would say, therefore, that it served more as a goading factor, the way you put it, than a discouraging factor. I think you will find that American Potash is a bit larger than we are. You also will find that their management has been relatively well settled [fol. 1548] in their top management jobs, and I think you have to weigh both of those factors in relation to Pennsalt, where the top management is, or was, relatively new in its responsibilities at the time this took place.

I think those are factors which you can't say any or one

of them is the thing, but I think they all contribute to the situation.

Q. I refer you now, Mr. Drake, to a memorandum to you dated March 12, 1957 from Dr. LaLande for the committee, entitled, "Sodium Chlorate Plant in the East, Report Part 1."

I would like the reporter to mark this document Plaintiff's Drake Exhibit 17.

(The document referred to was marked Plaintiff's Drake Exhibit No. 17 for identification.)

Have you recently re-read this document, sir; would you like a moment?

A. I'm just reviewing it right now, thank you.

(Recess.)

A. I was a little hazy I think in regard to American Potash and your question on them. First of all I think I indicated I thought they were larger than we are; they aren't. When I think about it I recognize they aren't. And the other factor which I think is desirable to mention there, because it is a factor, is that undoubtedly their tie-up with [fol. 1549] Solvay, who act as their agents on chlorate, must have had some bearing on their courage, shall we say, in going into the southeast.

Q. When you refer, sir, to their tie-up with Solvay, what do you know about the tie-up which American Potash had with Solvay early in '57 when this announcement was made in the press?

A. Nothing other than, as I understand it, Solvay were acting as sales agents for Potash in connection with their chlorine dioxide process, "their's" being Solvay's.

Q. Referring specifically to American Potash's sales agency arrangement with Solvay, can you tell us why Pennsalt could not have secured a similar arrangement with Olin?

A. I think I covered that earlier in that we weren't willing to take the risk of being that dependent upon an organization which had no financial interest in the venture.

Q. Are you saying that you did not wish that Pennsalt—strike that.

Mr. Drake, would it be correct to characterize your last answer as stating that Pennsalt was not willing to compete with American Potash on the same terms that Potash—no, in terms of the arrangement which Potash had with its sales agent?

A. That's correct.

Q. On page 2 of Exhibit 17 in the first line, Doctor La-
[fol. 1549a] Lande states:

"Pennsalt's important position in sodium chlorate in the northwest has provided us with the manufacturing, selling and technical service know-how required for the merchandising of this product. It would appear logical, therefore, for us to extend our position in the east provided we could be assured of a market potential of at least 15,000 tons per year."

Mr. Drake, first directing your attention to the first sentence of that report, do you agree with Dr. LaLande's statement?

A. Dr. LaLande is making an observation which he is entitled to do. I think in evaluating that observation, particularly in the areas of selling, you should recognize that Dr. LaLande is an eminent scientist and I don't look, with all due respect to Dr. LaLande, to him as an expert in our ability to sell.

Q. With the exception of the word "selling" as it appears in that first sentence, would Dr. LaLande's statement be correct?

A. His statement is correct in terms that we have an important position in the manufacture, the sale and the technical service know-how in the northwest. Now that manufacturing know-how can, and is, being transferred to the east. The other probably could be transferred to the
[1549b] east given time.

The merchandising of this product in the northwest, I would agree with that statement.

Q. In your view, sir, would the selling experience to the pulp and paper companies in the northwest be of value in selling to pulp and paper consumers in the southeast in terms of the relationship between the companies or plants in the northwest and those in the southeast?

A. I think I covered that earlier in saying one of the essentials in selling a commodity of this sort is the creation of a relationship between the prospective buyer and the salesman, encompassing the various areas that I touched upon before, not the least of which is the creation of confidence in the man and the company, all of which takes time.

Q. Are these problems any different from those faced by your company whenever it undertakes to sell a new product to a new class of consumers?

A. In the main, no.

Q. Aren't these factors, sir, the basic ingredients in the competition which your company gives to other companies when it decides to enter into any new business?

A. Yes.

* * * * * * *

[fol. 1549c] Q. The first line on the first page of Exhibit 17 shows that Dr. LaLande's report was on behalf of the committee consisting of himself and Messrs. Karr and More. That's K-a-r-r and M-o-r-e.

Can you tell us, sir, what the position in the company of those two individuals was at the time of this report?

A. Mr. More was the, in effect, the general manufactur-
[fol. 1549d] ing manager in the northwest. Mr. Karr was, in effect, the technical advisor to Mr. Shanaman in the northwest.

* * * * * * *

Mr. Freed:

I would like the reporter to mark this as Plaintiff's Drake Exhibit 18.

(The document referred to was marked Plaintiff's Drake Exhibit No. 18 for identification.)

[fol. 1549e] I call your attention to that part of Mr. Shanaman's memo which indicates disappointment with Dr. LaLande's report because:

"The most important part of the investigation is related to the reasons why the investment should be made or not

made, even if the return was expected to be less than company policy."

I ask you, sir, whether Mr. Shanaman's understanding of the basis on which Dr. LaLande's investigation was undertaken was shared by you in this respect?

A. I think I'd have to answer "yes".

Q. And in the last sentence of the memorandum, Mr. Shanaman speaks of the "influence that a chlorate plant might have on long-range relations with other companies".

Could you enlighten us as to the meaning of that statement? What effect could a Pennsalt chlorate plant have on long-range relations with other companies?

A. Oh, it could have a favorable effect. For example, in those paper mills that now are in the northwest and have operations in the east. I think it enhances Pennsalt's relationship for them to know that we are able to supply them out of two locations. That's one example.

Q. Would you infer any other implication of the effect of a chlorate plant on long-range relations with other companies?

[fol. 1549f] A. I don't get any further reaction to that.

Q. With reference to your earlier answer with regard to the reasons why the investigation was undertaken, did you in fact contemplate that there might be circumstances under which Pennsalt would proceed with a sodium chlorate plant in the east, where the projected return on investment was less than company policy?

A. No, sir.

Q. I wonder then if you would explain your "yes" answer to my earlier question with regard to the meaning of Mr. Shanaman's——

A. Did I concur with his observation?

Q. Observation, yes, sir.

A. On that—the observation was that he was disappointed in the results of the report, and that is what I was concurring with.

Q. Oh, I'm sorry, sir.

Then let me again direct your attention to that portion of the memo in which Mr. Shanaman states that: "The most important part of the investigation is related to the reasons why the investment should be made or not made,

even if the return was expected to be less than company policy."

I infer from Mr. Shanaman's statement that he is saying Dr. LaLande was to recommend whether Pennsalt ought to proceed on a sodium chlorate plant even though the return [fol. 1549g] might be less than your investment policy. Do you infer something different from his statement?

A. It was not my understanding that he was to make an investigation to justify going ahead with the plant, even though the return was less than the required return.

Q. In other words, as you looked at it, the only successful conclusion to Dr. LaLande's study in terms of Pennsalt action would be a decision to proceed with a chlorate plant because it met company investment policy, or a decision not to proceed because it didn't meet company policy, but there was no inbetween area?

A. That is correct.

Q. In our references to your investment policy, shall we assume, or is it correct to assume, that 30 per cent was the target return on investment that you were seeking, or is there a different figure that existed at this time as marking your investment policy?

A. The investment policy guide-post, which deals with the expansion of existing products or the location of a plant, or another plant, for a product which we are already making, called then, and I think now, still calls, for an investment of a minimum of 25 per cent.

Mr. DeLone: Return on investment.

The Witness: Return on investment of 25 per cent, that's [fol. 1549h] the total investment. I don't know whether they have our investment policy on this or not.

* * * * * * *

The Witness: I think this would help clarify a lot of things for you if you just took that.

(The witness handed a document to Mr. Freed.)

Mr. Freed: In order to clarify the record at this point, I would like to have marked as Exhibit 19 the document furnished by Mr. Drake entitled, "Capital Investment Policy, No. 1, Expansion by Construction or Purchase of Fa

cilities". It is a single page, at the bottom of which appears the number "2".

(The document referred to was marked Plaintiff's Drake Exhibit No. 19 for identification.)

* * * * * * *

[fol. 1549i] Q. What was the premise on which the market survey was undertaken? What was the purpose for which this authorization was given to Dr. LaLande?

A. If I recall it, to find out how much sodium chlorate Pennsalt thought it could sell in the southeast.

Q. I would like to direct your attention, sir, to the conclusions stated in Dr. LaLande's report of March 12th, which has previously been marked Exhibit 17, in which on [fol. 1549j] page 5 he states:

"Because the return on the investment on a minimum size sodium chlorate plant (15,000 tons per year) is considerably less than that required by our investment policy for this type of project (30 per cent before taxes), it is first necessary for management to consider an eastern installation of this chemical on the basis of investment return and available capital funds. It might be decided that this case can be considered an exception and that the return is acceptable and that new capital funds can be made available by the company or through outside financing (by borrowing more money or by forming a subsidiary with another company).

"Another approach requiring analysis would be the removal of other projects totalling approximately $5 million from our plant and the substitution of this sodium chlorate project."

In that conclusion Dr. LaLande gave a number of alternative reasons upon which a market survey might be justified. There is no indication that any of the alternatives might involve a return on investment that would meet the investment policy which, he stated there, was 30 per cent before taxes.

I wonder if you can enlighten us in light of these conclusions as to the premise or the basis on which the meeting

in your office on March 27 authorized Dr. LaLande to pro-
[fol. 1549k] ceed with the market survey?

A. He was authorized to proceed with the market survey not on the basis of 15,000 tons of chlorate, nor on the return on investment which he had estimated that we could realize on a 15,000 tons plant, but to make, as we have previously said, once and for all a market, a thorough market survey for Pennsalt for sodium chlorate in the southeast. There was no intention then, never has been any intention, certainly on my part, that we would ever consider going into a sodium chlorate plant project showing a return anywhere near as low as indicated in there.

Q. Was there any intention or consideration given to going into a sodium chlorate plant at a return less than 30 per cent?

A. I think I would best answer that, most accurately answer that by saying that I am certain that if we would consider—there's nothing sacred about 30 per cent—if that is the figure we were using, then if it were 27 per cent you certainly would give it real consideration. but certainly we would not give it consideration anywhere around 15 per cent.

I think it might be well also to say that I wouldn't give any particular significance to the figure of 27. I merely cite that as an example of an order of magnitude.

[fol. 1549l] Mr. DeLone: Do you have that exhibit that Mr. Drake handed you, the Investment Policy? I think it made reference to a different figure.

(Mr. Freed handed the document to Mr. DeLone.)

Mr. Freed: I wish next to show you a document to be marked Plaintiff's Drake Exhibit 21, which is a memorandum from Mr. Land to Mr. Willits, dated March 29, 1957, entitled "Sodium Chlorate Plant in the East".

(The document referred to was marked Plaintiff's Drake Exhibit 21 for identification.)

By Mr. Freed:

Q. In the first sentence of this brief memorandum Mr. Land indicates that his industrial division would be willing to cooperate with Dr. LaLande's study, and in so stating he

makes the remark, "We have many contacts and are, in fact, selling some sodium chlorate now."

Are you aware of the many contacts to which he was referring?

A. No.

Q. Did you realize at this time that the industrial division considered itself to have many contacts in the eastern sodium chlorate market area?

A. No.

Q. On April 4, 1957 Mr. Land wrote a memorandum to Dr. LaLande in which he suggested that since the industrial [fol. 1549m] division could not furnish an experienced man to work with Mr. Sloan for three months on the market development survey, it might be desirable to arrange to contract, to have the market information supplied from outside sources.

I would like the reporter to mark this document as Plaintiff's Drake Exhibit 22.

(The document referred to was marked Plaintiff's Drake Exhibit No. 22 for identification.)

I ask you, Mr. Drake, whether a survey conducted by members of your own organization, your own sales organization, might not have served the dual purpose of assembling the information which you required, and also serving to acquaint the consumer industry with Pennsalt's interest and capability, or at least personalities in this area. If personnel had been available would that advantage of personal contact by Pennsalt to its prospective sodium chlorate customers might not have accrued to the company?

A. I'm sure it would have.

Q. On April 16, 1957 in a memorandum to Dr. LaLande from Fred Shanaman, the document being marked as Plaintiff's Drake Exhibit 23. (Handing document to the witness.)

(The document referred to was marked Plaintiff's Drake Exhibit No. 23 for identification.)

Mr. Shanaman suggested that Brian Shera, S-h-e-r-a, or Harry Fisher might assist in the making of the market survey. Were Messrs. Shera and Fisher, to your knowledge, [1549n] then engaged in rendering technical services

to the chlorine dioxide bleaching units of the pulp and paper industry in the northwest?

A. I'm fairly certain that they were rendering technical service to the pulp and paper industry in the northwest and, undoubtedly, included work on sodium chlorate, whether it specifically included work on chlorine dioxide I don't know.

Q. Was the subsequent decision of your company to retain the services of Arthur D. Little, Inc. a decision which also caused the cancellation of the Shera or Fisher market survey trip to the southeast?

A. I can't recall whether either Shera or Fisher went to the southeast or not. It's possible they did, anyway, but I think the decision to go ahead with Arthur D. Little was simply a matter of availability of manpower in the time allotted to get this study completed; weighing the pros and cons of an outside survey versus an inside survey it was decided to go ahead with Arthur D. Little.

* * * * * * *

[fol. 1549o] Q. Then directing your attention solely to [fol. 1549p] the sale of sodium chlorate to pulp and paper consumers who make use of the Olin or Solvay technical services, would you expect that company attempting to break into that sodium chlorate market would be at a competitive disadvantage if it were competing with—if it did not have the services that Mathieson and Solvay have?

A. All other things being equal, yes.

Q. In your view does the rendering of technical services by Olin give it a significant competitive edge over Pennsalt in the ability of the two organizations to market sodium chlorate in the southeast?

A. Again all other things being equal, I would say yes.

Q. And would the same thing be true to the best of your knowledge of a competitive advantage which Olin will enjoy over Columbia Southern when that Pittsburgh Plate Glass subsidiary begins to market sodium chlorate?

A. This has to be based on my knowledge, or lack thereof of how well Columbia Southern is set up to proceed in the southeast market-wise. But assuming that they are in the same position as we are, I would say that Olin would have an advantage over them.

Q. As far as you know, would there be any difference

in the competitive advantage which Olin enjoys over you and that which it will enjoy over Pittsburgh Plate?

[fol. 1549q] A. Yes, very definitely. I think Pittsburgh Plate have supplied other chemicals down in the southeast, I think this is correct, whereas we haven't to any degree.

Q. Is it your view, Mr. Drake, that there is a distinct competitive advantage in terms of ability to sell sodium chlorate in the south between a company which has previously furnished a substantial amount of chemicals to the pulp and paper industry, and one which is a relative newcomer, such as Pennsalt?

A. Unquestionably.

Q. I direct your attention, sir, to page 46 of the Little Report, paragraph No. 5, entitled, "Value of Full Product Line", which states as follows:

"Our field contacts among pulp mill purchasing agents and operating personnel indicate that a new supplier of sodium chlorate will not gain much by offering a full line of pulp mill and bleaching chemicals. As long as the supplying company has a satisfactory reputation in the pulp industry it makes little difference whether it is able to provide one or more pulping chemicals. One purchasing agent stated that such a product line might actually work to the supplier's disadvantage, since his company does not like to place an excessive dollar volume with any one supplier. The fact that a potential new chlorate supplier was already accounting for a large dollar volume might be justification [fol. 1549r] for its not being given the chlorate business."

A. First I cannot——

Mr. DeLone: Has he asked you a question? He just read the material.

Mr. Freed: I don't believe I asked a question.

By Mr. Freed:

Q. I wonder, sir, if you could reconcile your last answer with the conclusions in the Little Report?

Mr. DeLone: I don't see any inconsistency between them.

The Witness: I can answer it, I think.

By Mr. Freed:

Q. Go ahead, sir.

A. The early part of this paragraph states, if a company has one product does it help them to have more than one product. Now I don't think that has any bearing on the earlier question, that first part of the statement.

Now the second part, the fact that a potential new chlorine supplier was already accounting for a large dollar volume might be justification for its not being given the chlorine business. I can't argue with that. I can conceive that such a situation might exist in an isolated instance. But it is an unquestionable fact that if people know you and have a respect for you, they are going to accept you and your product, old or new, to a greater degree than they are going [fol. 1549s] to accept initially the product of someone whom they don't know.

Q. Is it correct, sir, that the conclusion of the Little organization, as stated on page 47, with respect to Pennsalt's reputation in the industry, coupled with its conclusion on page 46 concerning the ability of a company with a satisfactory reputation to sell sodium chlorate, would, when taken together and accepted as the statements of a reliable organization, give considerable encouragement to the status which Pennsalt enjoyed at the time it received this report?

A. I think I have elaborated a bit on that before with my reference to the middle states, Wisconsin and Minnesota. Now if I was assured that this applied to the whole area, southeast as well as Wisconsin, which I am not, I would have naturally added confidence of Pennsalt's ability, but I don't think this does apply to the southeast.

Q. Was any effort, to your knowledge, made to determine whether these conclusions with respect to Pennsalt's reputation and the value of the full product line were applicable to the southeast?

A. I don't know.

Q. In your understanding wasn't the purpose of the Little Report to survey the market potential in the southeast for selling sodium chlorate?

[fol. 1549t] A. I would assume so.

Q. Then are there some facts which have not yet come out on the record which would lead you to believe that the

conclusions reached by the Little organization on pages 46 and 47 here were not directed to the area in which Pennsalt looked for its principal sodium chlorate market potential?

A. Well, the people in Arthur D. Little are human just like the rest of us, and they can get carried away and give over-emphasis to one element and draw the conclusion that it applies to the whole. I still maintain, because we have not had any problem about the southeast that I know of, of withdrawing chlorine or caustic soda from the market because we never had it down there, so how could we possibly create any antagonism in the southeast.

Now what they're talking about there is no antagonism toward it as a corporation.

. . . . . .

[fol. 1549u] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 392B

WEDNESDAY MORNING SESSION

Whereupon WILLIAM P. DRAKE resumed the stand and, having previously been sworn, was examined further and testified as follows:

FURTHER EXAMINATION ON BEHALF OF THE PLAINTIFF THE UNITED STATES OF AMERICA

By Mr. Freed:

Q. Mr. Drake, we concluded yesterday afternoon with a brief discussion of the Arthur D. Little Report and the analysis of that Report and further work done by the commercial development department of Pennsalt. The files indicate that several meetings were held by Pennsalt personnel in the ensuing months, but the next occasion in which you personally participated in a discussion of the chlorates project in the east appears to be reflected in a memorandum dated December 5, 1957 from W. Cooper Willits to the file, titled, "Chlorates—East."

I would like the reporter to mark this Plaintiff's Drake Exhibit 26.

(The document referred to was marked Plaintiff's Drake Exhibit No. 26 for identification.)

I ask you, sir, does Mr. Willits' memorandum refresh your recollection of the conference which took place in your office on December 5, 1957?

A. Yes, sir.

. . . . . .

[fol. 1549v] Q. Mr. Willits' memorandum refers to a question by you as to whether Pennsalt agrees that it is unlikely, in view of the capital requirements and relatively low return on investment, that Pennsalt would alone approve construction of an eastern plant, and this memo further reflects that the answer was "yes".

Can you recall—strike that.

Was this decision or this answer in December of 1957 a final answer as far as Pennsalt was concerned, as far as its ability to go alone, or was this simply an indication of probability with respect to Pennsalt's future plans regarding a lone venture in the eastern part of the United States?

A. I think you can consider this—

Mr. DeLone: A lone venture, l-o-n-e, I take it?

Mr. Freed: Yes, sir.

Mr. DeLone: All right.

The Witness: I think you can take this as the final decision that on the manufacture and sale of sodium chlorate alone we had decided not to go futher with it.

By Mr. Freed:

Q. Then from this date on, would it be correct to assume [fol. 1549w] that the Pennsalt only viewed the sodium chlorate in the east project as a joint venture or no venture at all?

A. I would have to modify my answer on that to this degree, that later on we did reconsider going it alone with a perchlorate in the picture, but it was only when the perchlorate came into the picture that we took another look at the "alones". Otherwise my answer would be yes, that

we decided that if we went ahead at all it would have to be with a partner on sodium chlorate.

* * * * * * *

[fol. 1549x] Mr. Freed: I would like the reporter to mark as Plaintiff's Drake Exhibit 27 a memorandum to the file [fol. 1549y] from J. L. Logan dated February 4, 1958, entitled, "Sodium Chlorate".

(The document referred to was marked Plaintiff's Drake Exhibit No. 27 for identification.)

By Mr. Freed:

Q. Mr. Drake, does the first paragraph of Exhibit 27 refresh your recollection as to the outline which, according to this memorandum, you gave concerning Pennsalt's long-range interest in chlorate in the south, and your suggestion that there was sufficient, that both Pennsalt and Olin had to contribute to seriously consider joint activity?

A. I would think that I expressed in broad terms the interest that we had had, the interest that we continued to have except that we couldn't make a go of it financially because of the low rate of return, and I undoubtedly indicated that the idea of Pennsalt with its technology and Olin Mathieson with its position distribution-wise aided to a degree, at least, by their chlorine dioxide process, assuming that Olin Mathieson were interested in exploring the idea of a production facility in the southeast to supply that growing market: wouldn't it be a good idea to really explore this together and see if there was anything in it for the two companies.

Q. Can you recall Mr. Logan's reaction?

A. I think Mr. Logan's reaction was, this looks interest-[fol. 1549z] ing to me. I want to talk to some of my people about it.

Q. Did Mr. Logan at that time tell you anything about efforts which Olin had been making in the sodium chlorate production or in the sodium chlorate business?

A. I don't recall actually that he did or didn't.

Q. You have no recollection on that point?

A. No.

Q. Can you recall whether it was you who stated, as

indicated in the second paragraph of exhibit 27, that Pennsalt was shortly to announce embarking on the perchlorate business in Portland?

A. The chances are that I did. I don't remember specifically that I did but it would be a likely thing for me to do.

Q. Can you recall any discussion at this time of tying in the announcement of the perchlorate plant with an announcement of your plans or interest in an eastern sodium chlorate facility?

A. There again I don't recall specifically mentioning that at that meeting. I know we did make the announcement later that when we announced the perchlorate plant in the northwest that we were considering a plant at a place unknown, not designated, another plant, but whether I specifically mentioned that at the meeting, I really don't recall at this [fol. 1549aa] particular meeting.

Q. Can you recall the circumstances which led Pennsalt to make the announcement about another sodium chlorate plant at an undesignated location?

Mr. DeLone: I didn't understand the witness to say sodium chlorate plant. He was talking about perchlorate plants.

By Mr. Freed:

Q. Could you enlighten us about the announcement of another plant to which you have just alluded?

A. Yes, I think so. This was one of the times when the flurry of great interest in perchlorates developed. Projections were being made by several government agencies as to the demands. We had been urged by at least one government agency to build a perchlorate plant because there was then— I think I'm correct on this—there was only the one producer that I can recall, and that was a Navy plant, that American Potash was operating at Henderson, Nevada, and they would like to have another supplier. The projections of perchlorate consumption were rather fantastic at the time.

When we announced the building of a plant at Portland for perchlorate we felt it tactically desirable to also indicate an interest in at least a perchlorate plant at some location

other than on the west coast, and that is what we did in this [fol. 1549bb] announcement.

Q. Do you recall whether the announcement referred to any product other than perchlorate at the second location?

A. I don't think it did. I'm not positive of that; I'd have to look at the announcement again.

* * * * * * *

[fol. 1549cc] Mr. Freed: Or you found in your files copies of Pennsalt's press release?

Mr. Subak: The only thing we found in our file was a copy of Pennsalt's press release.

Mr. Freed: The response which Pennsalt has given to date to Item 44 of Interrogatory Set 3 indicates, as with respect to any documents, the following sentence: "The publicity releases issued at the time of the announcement of the new Portland plant reflected this thinking." To the extent that that is a designation and a description with particularity of documents which relate to the announcement of the underlying facts, I would like to request at this time a copy of the announcement if counsel for Pennsalt has it in order that we might pursue this subject with Mr. Drake.

Mr. DeLone: We do not have the press release referred [fol. 1549dd] to with us. Mr. Subak has already stated that he understands the press release, his recollection is the press release is substantially the same as what you already have, which is what appeared in "Chemical Week." We certainly have no objection to proceeding on that premise and will be glad to supply you with the prese release. We did not understand that that had been requested of us up until this time, but we have no objection to giving it to you when we can get it. It's in Philadelphia.

Mr. Freed: Do you have the date on which the press release was issued?

Mr. Subak: It was dated a day or two before the earlier date mentioned in the government interrogatory.

Mr. Freed: That would be then about February 11, 1958?

Mr. Subak: That's approximately correct.

By Mr. Freed:

Q. Mr. Drake, do you know the background of the press release to which counsel for the government and for Pennsalt has just been referring with respect to the place at which it was issued, first of all?

A. I think probably it was issued from Philadelphia.

Q. Do you recall whether the press release made any mention of anything other than perchlorate when it referred to a plant at an unannounced location in the south?

[fol. 1550] A. I doubt very much that it did. I think I can give you a little more background that may give you some help here. This was at a time when there was keen interest on the part of the general public on this still fascinating field of high energy. Now Pennsalt, for some, has been interested in the high energy field through elemental fluorine, perchlorofluoride, chlorine trifluoride and similar products. As you may know elemental fluorine has the highest energy potential of any known element.

As a part of our image, if you will, we were trying to create Pennsalt in the eyes of the public and for a good reason, as a factor, and a growing factor, in the high energy field. I think if you will look at this announcement in that light you get a little better perspective of what was behind, not only the announcement of the perchlorate plant at Portland, but also the idea that we might build another plant elsewhere in the country.

Q. At the time the release was issued, did you have a particular location for that plant in mind?

A. I'm sure that we were leaning toward Calvert City for a number of obvious reasons. We already had a plant there, we had lower power costs there. We were giving some thought to, as I expressed earlier, the utilization of the perchlorate to sweeten up the chlorate venture, and it would do that. So that I think, going it alone, particularly [fol. 1551] we would probably have put it at Calvert City.

Q. At the time the release was issued was it contemplated that Pennsalt would go it alone at the location with a perchlorate plant?

A. I think very serious thought was being given it at that time.

Q. And in the serious thinking which was given, was

the production of sodium chlorate for use in the ammonium perchlorate contemplated at the Calvert City location?

A. I'm sure that if we had put the perchlorate plant at Calvert we would undoubtedly have put the chlorate plant there.

Q. At the time the announcement was issued was there any anticipated size, at least in terms of the Pennsalt thinking, behind the release of the sodium chlorate production facilities?

A. I'm a little hazy on these figures, but as I recall it we were then thinking, either then or I know at some point we were thinking, of a 30,000 ton sodium chlorate plant, 10,000 of which would be utilized in the manufacture of perchlorate.

Q. At the time the release was issued what was the thinking within the company with respect to the other 20,000 tons of sodium chlorate?

Mr. DeLone: Now the witness just said he wasn't sure of [fol. 1552] the timing so far as these figures are concerned. You have asked him whether it was at the same time as the release and he said he wasn't sure whether it was before or after. He knows there was such thinking, so that you may be clear on that.

Mr. Freed: Would the reporter read back the last question?

(The reporter read the question.)

Mr. DeLone: I think you had better add to my comments and I therefore object to the form of that question because it assumes as a fact that the thinking was simultaneous with the release when the witness has said he wasn't sure about the timing of the contemplated 30,000 ton plant in relation to the time of the release.

By Mr. Freed:

Q. Mr. Drake, was any consideration given at the time of the release to the allocation or disposition of the remaining portion of the production of the plant which would produce sodium chlorate to make ammonium perchlorate?

A. I think I would have to refer you back to the comment I made earlier as to the purpose of the release in regard

to a second possible perchlorate plant. Our thinking had not crystallized on even whether we would put the plant in, let alone where we would put it or how big it would be, or how we would dispose of even the perchlorate. It was, if [fol. 1553] you can boil it down, I think you must consider it a tactical statement.

Q. And what was the tactical objective sought by the issuance of this statement under the circumstances just outlined?

A. To further establish Pennsalt as a factor in the high energy chemicals field.

Q. At the time the release was issued did you, within the company, gauge the likely effect on competitors of Pennsalt in the perchlorate field?

A. I don't think that was of too great a consideration to us.

Q. Who constituted the audience to which your announcement was directed?

A. Well, I think, as I indicated before, the general public.

Q. But is it your testimony that there were no consumers or competitors in the perchlorate field whom you had in mind at the time the release was issued?

A. I'm almost certain that we were not thinking about competitors. I'm equally certain that we hoped that the consumers, or the consumer, namely the United States Government, would take note that Pennsalt was ready to become a factor, a substantial factor, in the ammonium perchlorate field if and when the demand for perchlorate de- [fol. 1554] veloped, there then being an indication such a demand might develop.

Q. Was Pennsalt prepared to proceed to construct a perchlorate plant in the south if, in response to its announcement, a demand appeared?

A. The preliminary figures that we had on a perchlorate plant I recollect were sufficiently good. To answer your question, I think with very little doubt, in the affirmative.

Q. When had the suggestion of an eastern perchlorate facility first been made within the Pennsalt organization?

A. I don't recall.

Q. Can you recall whose suggestion it was?

A. Not specifically. We have had a number of people circulating among the government agencies and had had,

for some time, developing projections and the like of what the demands might be for various types of high energy chemicals, but I don't recall specifically who the individual was that first made the suggestion.

Q. Can you recall when the decision was made to—strike that question.

Can you recall when the question of issuing a press release with regard to a southern perchlorate plant was first raised?

A. No, I can't.

[fol. 1555] Q. Had Pennsalt, prior to the time of the release, made an economic evaluation of the prospects of a perchlorate plant in the south?

A. I think I'll have to ask you what you mean by "economic evaluation".

Q. Perhaps——

A. I'm not trying to be difficult. I'd just like to understand you.

Q. Perhaps I had better withdraw my question and ask you, sir, what preparatory work Pennsalt had done prior to making an announcement with respect to its perchlorate intentions in the south?

A. I think we have made some estimates on it and I don't recall again whether it was the specific date on a perchlorate plant along with chlorate, because you have to make chlorate to make perchlorate. I am sure it was at that stage a very unrefined estimate, when I say that, probably as I referred yesterday, to a plus or minus 25 per cent accuracy, if that. We had a much more detailed estimate of the economics of the perchlorate plant for the northwest when we actually put the northwest plant in.

. . . . . .

[fol. 1556] By Mr. Freed:

Q. To return to the document designated Exhibit No. 27, I would like to ask you, Mr. Drake, whether the discussion of perchlorate referred to in paragraph 2 in any way included a discussion of the release which, as Mr. Subak has indicated, was issued eight days after the meeting.

[fol. 1557] A. It's possible but I don't recall it.

Q. Do I correctly understand you, sir, that you have no

recollection of communicating to Mr. Logan or that anyone from Pennsalt at this meeting communicated to Mr. Logan the fact that Pennsalt was then contemplating a plant and an announcement of a plant to be located in the south to produce perchlorates?

A. I really don't recall it.

Q. In the first sentence of the third paragraph in Exhibit 27, Mr. Logan states: "It is felt that neither Olin nor Pennsalt should move in the chlorate or perchlorate field without keeping the other party informed, and I agree to do so."

I wonder, sir, if you could recall for us the conversation which led Mr. Logan to record this statement?

A. As I said earlier, I don't recall any discussion of the perchlorate, although, as he has indicated here, it may be just my poor memory. I am sure in regard to the chlorate that having explored this and without making any commitments I am positive that we each made this clear to one another, that we would or would not have a joint venture or that we would or would not do something alone. We merely indicated that because of the possibility of an interest in a joint venture that we would exercise the courtesy to one [fol. 1558] another of advising one or the other of our respective further interests in chlorate before we would take any definite action.

Q. In light of your statement, sir, that no decision had been reached, at least by Pennsalt, with respect to a single or a joint venture, would it be correct to say that at this time both Olin and Pennsalt were potentially either partners or competitors in the sodium chlorate field and the perchlorate field.

A. I certainly would say that it was evident at this point that we were potentially partners. I'm not in a position to say whether Olin would be, if they went it alone and was ready to go alone and, therefore, would become a competitor.

Q. Then just dealing with what you know of the Pennsalt organization at this time, is it true that Pennsalt had made no decision as to whether it would become a partner of Olin's or a competitor in its own right in the sodium chlorate and perchlorate business of the south?

A. First I would say that we had already made the decision that we would not put in a chlorate plant on our own

in the southeast. We had not come to any conclusion as to whether we would put in a combined chlorate-perchlorate plant, although we were then in the process of exploring it. And we were also exploring the possibility of a joint ven-
[fol. 1559] ture, in its preliminary stages we were exploring it with O.M.

Q. Did the press release which was subsequently issued to your recollection give any intimation of a joint venture in perchlorate or chlorate?

A. No, no.

Q. Then would it be correct to say that at the time the realease was issued Pennsalt manifested to the general public, at least, its interest in becoming a competitor in the chlorate-perchlorate field in the south?

A. In the perchlorate field.

Q. To your recollection there wasn't any mention made?

A. I don't think there was any mention made in the release of chlorate.

Q. The last sentence of Mr. Logan's file memorandum, Exhibit 27, states that either party is to bring to the attention of the other any unusual aspects of this business which might make it desirable to proceed further with the production plans.

Can you tell us what these aspects might have been, as you recall the discussion in Philadelphia?

A. I think at this time, as you know, we had begun to supply some limited quantities of chlorate to Olin Mathieson
[fol. 1560] for exploratory purposes in the southeast. I am sure that that would be one of the things that would periodically be reviewed to see what progress they were making in this exploratory activity. What the word "unusual" means I don't really know.

Q. Can you recall mention of any circumstances, unanticipated circumstances, which someone present said might make it desirable to proceed further with production plans, apart from the sales arrangement that is referred to in the previous sentence?

A. No, I don't.

Q. Can you recall any discussion at this meeting of the interest of other competitors or other potential competitors——

A. No.

Q. —in the sodium chlorate business?

A. No, I don't.

Q. Were you aware, Mr. Drake, at the time of this meeting of the interest of Columbia Southern and some of the other chemical companies mentioned as potential competitors in the market surveys that had been made by and for your company?

A. Gee, I don't know, I don't recall that I was.

Q. Mr. Drake, what was the response to the press release which the Pennsalt put out respecting ammonium perchlor-
[fol. 1561] ate plant in the south?

A. Darn little, if any.

Q. Can you recall any communications to you, or known to you, by either potential customers or competitors of Pennsalt in chlorate or perchlorate?

A. No.

Q. Can you describe for us the evolution of the plans stated in the press release with respect to this perchlorate plant in the south?

A. I thought I tried to do that to give you the background as to what we were endeavoring to do, why we made the release. Would that suffice for your answer?

Mr. DeLone: I think perhaps you ought to repeat the question. I'm not sure he heard the question accurately.

(The reporter read the question.)

Mr. DeLone: You want to know what happened after the press release, don't you?

Mr. Freed: That states it much better, sir.

The Witness: In regard to that release?

By Mr. Freed:

Q. In regard to the release and the plans which were mentioned in the release.

A. As far as the release was concerned I don't recall anything that happened. As far as the plans were concerned, as I mentioned earlier, we were then in the process of evaluating, in a preliminary way at least, the economies
[fol. 1562] of a plant which would include perchlorate, and obviously would include chlorate because you have to make

the chlorate for the perchlorate. Other than that I'm afraid I can't add much to it.

Q. But was there a specific point at which the plans mentioned in the press release were scuttled, dropped?

A. I don't think there was, that you could put your finger on. I think, unfortunately, like many things it gradually died a natural death. I'm sure not without some careful appraisal. But I would think sometime in '59 probably we had learned enough, both from the acceptance of our product up in the northwest, that is perchlorate, and the revised projections of the governmental agencies that might buy this material to conclude that perchlorate wasn't in the picture, and I don't think you can probably put your finger on any specific meeting or date when it was, as you say scuttled.

Q. But to your recollection that was probably sometime in 1959?

A. I would think that would be about right.

Q. Since the time of that decision has anything occurred in the perchlorate field to alter your thinking about the potential for a perchlorate plant in the east?

A. I guess we're getting a little more sophisticated to the enthusiasm expressed by some segments of the missile in- [fol. 1563] dustry so that although there have been revivals of enthusiasm in the projection of the demand for ammonium perchlorate, and obviously we reacted somewhat to each of those revivals, there is nothing today even that would indicate that in the foreseeable future there will be the demands for perchlorate that we had hoped for back at the time we were discussing this.

Just as an aside, and I'm not sure this should go in the record——

Mr. DeLone: I don't know what you are going to say but if it is something that should not be on the record I have no objection to your stating it to Mr. Freed off the record, if he has no objection.

The Witness: I was merely going to indicate a matter of interest. He can decide whether he wants to put it in the record.

Mr. Freed: Why don't we leave it on the record. If it

turns out to be inappropriate, by mutual consent we can strike it.

The Witness: Well, the appropriateness of it has nothing to do with this. I'm just wondering—I guess this is all right—I was thinking of it from a security angle, that's all.

There is a study being undergone now, or is contemplated, to try to decide once and for all whether this area of energy [fol. 1564] is going to go solid propellent-wise or liquid propellent-wise, and I think pending the outcome of that it's going to be very difficult for anyone to know what the picture is going to be on a thing like perchlorate, which is one of the oxidizers used in solid propellents.

By Mr. Freed:

Q. In other words at the present time the future of perchlorates are in doubt, they're in a state of study and a state of flux and you cannot base any action today on—

A. No, no. There are a few of the missiles which will—are operational or will soon be operational that will probably use perchlorate. How extensively the missiles will be used themselves or how many will be built, I can't answer, I don't know who can. But it's in enough of a state of flux so that your statement is correct. It would be difficult to—for anyone, I think, to say what the demand for perchlorate will be in the foreseeable future.

Q. Mr. Drake, if the present state of flux in the perchlorate field should, within the near future, gel into a perceptibly increased demand for ammonium perchlorate, what would Pennsalt do with respect to the possible production of ammonium perchlorate in the east?

A. We'd certainly take a good look at it.

Q. And at the present time is this a project which you would consider at Calvert City?

[fol. 1565] A. Possibly.

Q. Has there been any discussion to your knowledge with Olin respecting the future application of sodium chlorate from your Penn Olin facility to the production of ammonium perchlorate?

A. Well, there has been discussion of it. I think the matter of perchlorate has been eliminated from the contemplated Penn Olin venture, from what I understand.

Q. It is certainly the understanding of counsel for the

government that sodium chlorate is the only product that Penn Olin contemplates manufacturing.

My question, however, is whether Olin and Pennsalt have discussed the possibility of applying the production of sodium chlorate at Calvert City to the production of ammonium perchlorate if the demand occurs in the future?

A. To my knowledge since the Penn Olin venture was confined to chlorate alone, there have been no discussions with Olin Mathieson about perchlorate.

Q. If the demand for ammonium perchlorate should rise substantially hereafter, would Pennsalt be able to construct its own ammonium perchlorate facility at Calvert City, using the output of Penn Olin?

A. Physically we could. Whether we could use the output of Penn Olin would depend upon the time and the availability of the chlorate. In other words, would there be an [fol. 1566] excess chlorate at Penn Olin which Penn Olin would be willing to sell to Pennsalt for the manufacture of perchlorate?

Q. Has Pennsalt reserved, by agreement with Olin, land at Calvert City for expansion of the Penn Olin facilities?

A. I think there is about 12 or 14 acres there, as I recall it.

Q. And do you have any plans or contemplation at the moment as to the manner in which that land might be used in the future?

A. The only thought that I know that has been given to any further use of that land would be in the event that the demand for chlorate is such that it increased to a point where an expansion of the chlorate plant was indicated.

Q. Is the amount of land which has been set aside on option to Penn Olin—does it bear a reasonable relation to the amount of land required to expand a sodium chlorate facility alone?

A. The technical fellows can answer that better than I can. I would think that it permits an expansion. How much of an expansion I don't know.

Q. Following your meeting in Philadelphia on February 3, 1958, when did you again——

A. Excuse me, you mean February 4th, I beg your pardon, yes, sorry.

Q. When did you next meet with representatives of Olin [fol. 1567]. with respect to the possible joint venture?

A. I don't recall any meeting with Olin until that one early in January of '60. I may have had meetings with them but I don't recall.

Q. There is a reference in the minutes of Olin's division management meetings in June and July 1958 that Mr. Logan conducted further discussions with Pennsalt with regard to the joint venture.

Do you have any recollection in the month of June or early July 1958——

A. No.

Q. —of discussing the matter with him?

A. No, I don't. I don't for a minute say there weren't discussions but I don't recall them and I don't think that they were with me.

. . . . . .

[fol. 1568] Q. On August 1, 1958 in a brief memorandum to Mr. Lawson from Mr. Land, the statement is made, "Mr. Drake has asked us to advise him if the figures shown in your letter to me dated May 28 are still valid, now that Hooker has announced its planned expansion."

I would ask the reporter to mark this as Plaintiff's Drake Exhibit 28.

(The document referred to was marked Plaintiff's Drake Exhibit No. 28 for identification.)

My question, sir, is whether you can recall the occasion for your renewed interest at that time in the sales estimates which Mr. Land refers?

I might ask the reporter to mark as Exhibit 29 a reply memorandum to you from Mr. Land dated September 8, 1958.

(The document referred to was marked Plaintiff's Drake Exhibit No. 29 for identification.)

This states that: "Mr. Lawson tells me that the figures given in his letter of May 28, 1958, concerning projected sodium chlorate sales in the east, are still valid."

[fol. 1569] I ask whether those two documents together perhaps refresh your recollection on what prompted this

renewal of interest in the summer of 1958 in Pennsalt's ability to sell sodium chlorate in the east.

A. I can't think of anything except as was the fact when Oldbury announced their expansion; Potash announced their plant and the same thought process went on in my mind, well, if they can do this why can't we? I suppose it was a needle in a sense. I can't think of any other particular reason why.

. . . . . .

[fol. 1570] Q. Yes, sir. In order to aid your recollection in this regard I would like the reporter to mark as Plaintiff's Drake Exhibit 31 a memorandum of October 29, 1958 [fol. 1571] from Mr. Eastman to Mr. R. W. Sloan entitled, "Chlorates Opportunities East of the Rocky Mountains".

(The document referred to was marked Plaintiff's Drake Exhibit No. 31 for identification.)

Does this three page summary of the meeting held on Monday, October 27, 1958 refresh your recollection with respect to a meeting that was attended by you?

A. Again I don't remember the specific meeting but it is obvious that there was one.

Q. Is it apparent from the face of the memorandum that you were present at that meeting?

A. At the meeting in October I was not present, but at the October 29th meeting—now wait a minute, I must have been present.

Mr. DeLone: Mr. Drake, for obvious reasons, hasn't had time before this examination to review, read all of these memorandums. Maybe you can give him a minute to look through this one; it would help.

Mr. Freed: I would be delighted to do so. All right, I appreciate your taking the time now.

(Pause for examination of documents by the witness.)

The Witness: All right, now what?

By Mr. Freed:

Q. On the first page of this three page exhibit, there is a paragraph near the bottom numbered 3, which states: [fol. 1572] "Industrial division will be responsible for the sale of sodium chlorate from the new plant."

Can you recall for us the discussion which underlay this one sentence summary?

A. I don't recall the discussion. I can assume that it stemmed from the sales forecast that Lawson had made on sodium chlorate.

This memorandum actually deals with two subjects, possibly three: The combination chlorate—perchlorate plant at Calvert, the expansion of the perchlorate plant at Portland, and another item on which I can elaborate a little here.

There is some reference here to the manufacture of a slurry. That was in connection with the possibility of making a slurry up at Portland and shipping it down the coast to one of the potential producers of rockets, where it would be converted to perchlorate at the plant site.

Q. Can you recall, sir, the discussion with underlay the sentence which begins at the bottom of page 1: "If the project is accepted Olin Mathieson may be used as a sales agent covering the pulp and paper industry, particularly in the early years"?

A. I think that is considered as an alternative, was considered as an alternative to the previous item 3 which says [fol. 1573] that industrial division will be responsible for the sale of sodium chlorate.

Q. Would the latter statement be an alternative or would it be a way in which to supplement the efforts of the industrial division?

A. It could be, it could be the latter.

Q. The statement is made in the third line, fourth line on page 2 that: "The long term price trend in sodium chlorate is probably up."

Can you tell us the basis on which that optimistic judgment was discussed?

A. I think that was exactly just what you said, optimism.

Q. But do you recall who made this forecast?

A. I don't recall that.

Q. In item No. F on page 2 is the statement that: "Am-Pot may shift away from its Solvay sales agent arrangement."

A. I don't know what the background of that one is.

Q. Turning then, sir, to the meeting referred to in item 1 of Exhibit 31, namely the next meeting will be held in the board room, I call your attention to a memorandum, again from R. J. Eastman to R. W. Sloan, dated November 11, 1958 entitled, "Chlorates Opportunities East of the Rocky Mountains."

[fol. 1574] I would like the reporter to make this as Plaintiff's Drake Exhibit 32.

(The document referred to was marked Plaintiff's Drake Exhibit No. 32 for identification.)

I would be happy to suspend for a moment so you could refresh your recollection about that meeting.

A. All right.

(Pause.)

A. Very good.

Q. On the basis of your reading of Exhibit 32, sir, can you recall attending this meeting which was held on Monday November 3, 1958?

A. Actually, I don't. Obviously I was there but I don't recall it.

Q. Would you identify for us the persons attending the meeting as indicated by the beginning of the memorandum and indicate in each case what the position in Pennsalt's organization was that each occupied at the time?

A. Certainly. D-11, of course is myself. K-5 is Karr, L-9 is LaLande, L-14 is Land, L-45 is Lawson, S-12 is Fred Shanaman, and W-17 is Al Woodard.

Q. And what were the positions in Pennsalt of each of these people?

A. Oh, I'm sorry. Karr, as I mentioned yesterday, was in effect a technical adviser to Shanaman on the west coast. LaLande was Vice President and technical director of the [fol. 1575] company. Hugh Land was at that time General Manager of the industrial division east. Lawson was the general sales manager of the industrial division east.

Shanaman was head of the western operation and Woodard was the chief engineer.

Q. Was this meeting a management council meeting?

A. No.

Q. How can you describe the kind of meeting it was in light of the people who attended and the purpose. Was it simply an ad hoc committee for the consideration of a single project or was it a more regular group?

A. No, this was an ad hoc group with the exception of More. You recall a meeting that we referred to yesterday where Fred Shanaman had suggested that we have a group to study chlorates and included Karr and More? Well, this is an expansion, really, of that I would say. These are merely the people that had a specific responsibility in it.

Q. When you say "in it" do you mean in the——

A. In a certain phase of the——

Q. —in the chlorates opportunities east of the Rockies?

A. In the review of it, of the chlorates opportunities. Sloan obviously was the head of commercial development at the time.

Q. Directing your attention to page 2 of Exhibit 32, [fol. 1576] paragraph No. 2 he states: "The future market outlook is good, historically the U.S. producers have made little effort to expanding existing uses or to develop new uses. Experienced personnel believe that such efforts should be very rewarding."

Can you recall whether any examples were given of the potential future market for sodium chlorate that were discussed at this meeting?

A. No, I can't.

Q. Do you know, whether as a result of this meeting, Pennsalt undertook to develop or expand existing uses or develop new ones?

A. I don't think any unusual effort was made. I'm sure a continuing effort was being made in the northwest, particularly where the knowledge was to find additional uses for chlorate. Other than that I don't know of any.

Q. In paragraph 4 the statement is made that "As the newest producer, Pennsalt, should and could take leadership in promoting sales aggressively, extending existing uses, developing new uses, improving use technology" and in the last sentence of paragraph 4 it states that assembly

of these assets should start immediately by the industrial division.

Do you recall the discussion with reference to the statement that Pennsalt should and could take leadership in [fol. 1577] promoting sales aggressively?

A. No, I not only can't recall it, I don't even know what it means.

Q. In paragraph 5 reference is made again to prices and this time the prediction is made: "Sodium chlorate bulk prices should remain firm through the near future and then increase."

Can you recall any specific discussion that led to that more subdued appraisal of what would happen to prices?

(Laughter.)

A. Very well put. I think you are witnessing here a combination of the enthusiasm of some people who would have no responsibility for producing—when I say "producing", I am talking about particularly producing the sales—and the somewhat more leveling effect of those who knew more of the facts of life in regard to sales of chlorate.

Q. In paragraph numbered 7 Mr. Eastman's summary states:

> "A second followup announcement on this proposed Calvert City plant should be issued promptly to preempt the market from other interested companies, Solvay, Columbia Southern, Olin Mathieson, et cetera".

Can you recall any of the discussion at the meeting [fol. 1578] which led to this summary statement?

A. No. No, I do not. It was never done, incidentally.

Q. The next sentence states:

> "Wording of the publicity should be carefully chosen to avoid upsetting current pricing, particularly in perchlorates".

Could you explain to us how the wording of an announcement could avoid upsetting pricing, or can you recall any discussions at the meeting about this particular point?

A. That's a good question, but I can't answer it.

Q. At the bottom of page 2, paragraph 9, the statement

is made about 10 per cent of PCC's current sales are in pulp and paper and with the proposed expansion of chlorates this would be about 15 percent in 1963.

Can you recall where these 10 percent sales and projected 15 per cent sales—well, let me divide the question.

Where were these current sales which represented 10 percent of Pennsalt's current sales being geographically made?

A. This is largely in the northwest and included, I am sure, all Pennsalt products, not just chlorates. I think the reason it came up at this time is that I prefer, if possible, to not have any one industry represent more than, oh, 15 per cent of our total sales. I don't like to be too dependent [fol. 1579] upon any one industry. It gives your earning power more stability; you don't have the wide fluctuations.

Now, that's only a yardstick. I'm sure that if we had a good project that took it up to 17 per cent or something like that we wouldn't turn it down just for that reason, but we would take a look at it from that angle.

Q. Can you tell us today the approximate percentage of Pennsalt's total sales which go into the pulp and paper industry?

A. I'd give you an awful wild guess if I did and I think it might be misleading.

Q. Could you give us your best estimate, now, subject to—I believe we have already asked for——

A. I don't think it's fluctuated probably much from this 10 per cent.

Q. On page 3 of this exhibit, down here at the bottom of the page under item 2 it states:

> "In summary the following action and timing were agreed upon:
>
> "Mr. Drake will apprise the board of the proposed plans for production and marketing of sodium chlorate and ammonium perchlorate in the east. Specifically, the proposed plant at Calvert City is to have a capacity of 30,000 tons per year sodium chlorate and 10,000 tons [fol. 1580] per year ammonium perchlorate. Industrial Division will market 20,000 tons per year sodium chlorate and the balance of 10,000 tons per year will be used captively for perchlorate production".

Can you recall apprising the board of the subjects enumerated in this memorandum?

A. I'm not sure I did it at that time. I don't—I think possibly as I neared the board meeting I felt it might be a little premature. I don't recall mentioning it to the board.

Q. And a copy of this document——

A. If I did, it was very—a very incidental matter.

Q. In the copy of the document which we have there is a marginal note next to item 2——

A. Oh, yes, well that ties in with my last statement, then.

Q. There is the date 11/3/58 but what is the word above it?

A. Done. I hadn't noticed that, but obviously I did tell the board something about it; and I don't think that I placed great emphasis on it at the time for the reason I earlier expressed, that I had some feeling that it might be a little premature.

Q. In light of the gathering of experts from within the [fol. 1581] Pennsalt organization at the meeting which is the subject of Exhibit 32, can you tell us what factors, apart from those which came out at the meeting, led you to not follow up what the summary indicates was agreed upon—or, not followup—more than touching on it as you describe?

A. Yes, I think that's easy. I think undoubtedly the same reaction came to me then after reading this summary as it did today when I read it for, I guess, the second time.

It sounds almost too good.

Q. Can you recall specifically any of the discussion at the board meeting when you transmitted the substance of this recommendation to the board?

A. No. I think it was a matter of reporting. I usually do that in a situation like this where I merely say I would just like you to know that we're reviewing this possibility and if it gels, why, at some later date we'll come back to you with an appropriation request, or I may want to discuss it with you even before an appropriation request.

. . . . . .

[fol. 1582] Q. In item 3 on page 3 of Exhibit 32 the statement is made that following (2), which refers to the paragraph about Mr. Drake apprising the board;

> "Mr. Drake will make final decision to authorize action and expenditures for"

then it proceeds to list a number of areas in which you were to authorize action.

With respect to the first of these which was: authorize the Central Engineering Department to design and [fol. 1583] engineer for an appropriation request a 30,000 ton sodium chlorate plant and subsequently a 10,000 ton perchlorate plant, did you authorize that action?

A. I don't recall that I did. I think we had plus or minus 25 per cent. Now I'm trying to recall this from memory, obviously, but I would refer you here to the—I think there is some reference here to the growing demand for perchlorate. There was considerable enthusiasm expressed here, as I recall it. Oh, there it is, item 3 on page 3, "Demand for perchlorate appeared upon review to be more than adequate." This is the leveling statement here. It was the previous memorandum that had it, the perchlorate demand soaring. This states: "Military demands for ammonium perchlorate appeared, upon review, to be more than adequate to absorb all projected production during the next five years."

This is a little odd way to express it but I guess it means, our projected increase could be absorbed by the demands of the military, which was later found to be incorrect. How soon we found it to be incorrect I don't know, but I would guess that this, being one of the significant or the most significant factors in this project, that before authorizing the refinement of the engineering design, we checked further on this demand for perchlorate and I doubt, there- [fol. 1584] fore, that the actual further refinement was authorized.

Q. With respect to item B on page 4 of the program for final decision and authorized action, the statement is made:

"Industrial division immediately to plan, organize, and undertake entry in the southern and other eastern pulp

and paper markets. The objective will be the commercial sale of the product beginning in January 1960."

Can you recall taking any action with respect to that conclusion or recommendation?

A. No, and I think again that ties in with the hesitancy I had in going ahead with the further refinement and the cost connected thereto. There must have been in here at some point an indication that we couldn't dispose of the perchlorate, and that again being the key factor, there was no point in going ahead with this chlorate study or organization of planning, et cetera.

Q. Can you recall giving any instructions to Mr. Land, or whoever the appropriate official would have been, under Item B on page 4, with respect to proceeding or not proceeding to plan, organize and undertake entry in the southern and eastern pulp and paper markets?

A. No, I don't.

Q. Do you recall after the board meeting of November 3, which followed upon the meeting with these management [fol. 1585] people, as reported on Exhibit 32, that you thereafter had a conversation with Mr. Logan with regard to the location of a possible sodium chlorate plant? Can you recall any meetings with Mr. Logan at the end of '58 or beginning in '59?

A. No, as I mentioned earlier, the next meeting that I recall with any of the Mathieson group were those in January of 1960.

Mr. Freed: I would like the reporter to mark as Plaintiff's Drake Exhibit 33 a letter dated February 27, 1959 to Mr. Drake from Mr. Logan.

(The document referred to was marked Plaintiff's Drake Exhibit No. 33 for identification.)

By Mr. Freed:

Q. I would ask, sir, after you have had an opportunity to study that letter if you can recall the circumstances under which you and Mr. Logan had the meeting he referred to, if such a meeting did take place?

A. Well, first I don't recall the meeting, if a meeting took place. This well could have been simply a phone conversa-

tion or it may have come from the result of a discussion he might have had with either Shanaman or Land to determine whether Brunswick, Georgia—I think there was some reference somewhere in the files to also reviewing the possibility of a McIntosh location; I think he checked the [fol. 1586] power on that location as well.

Q. I believe your recollection in that respect is correct and is reflected by subsequent correspondence. You have no recollection of the circumstances that brought you together on this discussion of location of a chlorate plant in the early part of 1959?

A. You and I discussed in New York—that would have been January of 1959.

Q. In order to, I hope, aid your recollection, sir, I would like to show you a copy of the answer which you directed to Mr. Logan on April 3, 1959, which the reporter may mark Plaintiff's Drake Exhibit 34.

(The document referred to was marked Plaintiff's Drake Exhibit No. 34 for identification.)

A. The only thing I can think of is that in January I must have run into him in New York. I know there was no planned get-together, at least I don't recall that there was, and it could have been at one of the industry meetings or something of that sort.

Q. Was Brunswick, Georgia at this time a location in which Pennsalt had any interest of its own?

A. I don't think so. The reason I hesitate on this is that some years prior to that time we had given some thought to a chlorine plant in Brunswick, and then those rascals, Mathieson, beat us to the gun and put a plant in there [fol. 1587] before us, so there was no need for a plant of ours there.

Q. So at the time of these discussions with Mr. Logan the likelihood is that Brunswick as a possible location would have been suggested by Mr. Logan rather than yourself?

A. I think probably, yes.

Q. Can you recall—strike that.

As I understand your testimony you simply have no recollection of the meeting in New York with Mr. Logan?

A. I do not.

Q. A reference is made, sir, in a memorandum to you

from Dr. LaLande, dated April 10, 1959, which I would like the reporter to mark as Plaintiff's Drake Exhibit 35.

(The document referred to was marked Plaintiff's Drake Exhibit No. 35 for identification.)

This was to an appropriation request committee meeting held January 23, 1959, with reference to chlorate and chlorate-perchlorate plants at Calvert City and at Brunswick, Georgia.

* * * * * * *

[fol. 1588] By Mr. Freed:

Q. Mr. Drake, early in March or late in February 1959 information came to the attention of Pennsalt employees, and particularly Messrs. Sloan and Eastman, that Wyandotte Chemical Company might be exploring the sodium chlorate market.

On March 12, 1959 Mr. Shanaman directed a memorandum to you which enclosed a copy of the memorandum to which I just referred, and said:

"You asked for comments and about the only thing I can say, Bill, is that Wyandotte would be a logical one to produce sodium chlorate because of their interest in propellents and pulp and paper."

I would like the reporter to mark this Plaintiff's Drake Exhibit 36.

(The document referred to was marked Plaintiff's Drake Exhibit No. 36 for identification.)

I ask you whether your examination of that memorandum [fol. 1589] recalls to you the nature of your interest at this time in the building up by other third parties of possible entrance and interest in the sodium chlorate field?

Mr. DeLone: I don't have a copy of that document available.

(The document referred to was handed to the witness for examination.)

The Witness: I would say it would be merely a matter of keeping track of what competition or potential competi-

tion might be doing, and I directed the memo to Fred Shanaman, he being the one who was most directly connected with our sodium chlorate activities. There is nothing more to it than that.

By Mr. Freed:

Q. Did it, to your recollection, have any immediate effect on anything you were doing in the sodium chlorate——

A. No, none whatsoever.

Q. —study?

A. No, none whatsoever.

Q. Continuing the correspondence between Mr. Logan and yourself in the early part of '59, Mr. Logan wrote to you on April 7, 1959 referring, I believe for the first time, to McIntosh or Lake Charles as possibly more desirable locations than the one you had previously mentioned, which was Brunswick, Georgia.

A. Yes.

[fol. 1590] Mr. Freed: I would like the reporter to mark this as Plaintiff's Drake Exhibit 37.

(The document referred to was marked Plaintiff's Drake Exhibit No. 37 for identification.)

By Mr. Freed:

Q. I ask whether this additional document in any way aids your recollection on the discussions that had previously gone on between you and Mr. Logan?

A. Well, inevitably, such discussion involved where might a good location be for—well, locations, what are the potential locations for a possible plant. Brunswick, Georgia, McIntosh, Alabama, and Lake Charles, Louisiana, I believe are all plant locations of Olin Mathieson, and, therefore, it would be logical for them to try to determine what the possibilities would be, power-wise, et cetera, at those locations along with Calvert or any others that they might look at. I think that is the gist of it.

Q. But can you recall specifically now either a discussion on McIntosh or the other discussions that you had with Mr. Logan?

A. No, I'm afraid not.

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[fol. 1591] By Mr. Freed:

Q. Directing your attention to item seven on the second page of Exhibit 35, you will note that there are figures given for a 25,000 ton per year chlorate plant on which the return on investment is calculated at 27.1 per cent with a total [fol. 1592] Pennsalt investment of $3,169,000.

I wonder, sir, whether you can comment on whether or not that particular estimate was considered by Pennsalt management as a project which could proceed because of its proximity to the return on investment policy objectives of your company?

A. Absolutely not because of the cock-eyed accounting to which we referred yesterday, that is the thought that you could show it as a 50 per cent investment with half of it, the other half being borrowed at six per cent. I'm positive that we didn't give any consideration to that.

Q. If I understand you correctly, sir, you mean that for this calculation to have been correct, the total Pennsalt investment listed in the last column should have been doubled, is that correct?

A. In order to show what the return was on the investment, correct.

Q. Comparing the method of calculation of return on investment used on this Exhibit and that which was employed by Pennsalt in its Penn-Olin Chemical Company return on investment calculations, I wonder if you can tell us wherein the difference lies?

A. I'd be glad to tackle that again but I thought I clarified that one yesterday, didn't I?

Q. Perhaps in order to pinpoint my question, it would [fol. 1593] be well, Mr. Drake, to compare Exhibit 35 with a Penn-Olin Chemical Company return on investment calculation made by Pennsalt on September 21, 1960.

Mr. Freed: I would ask the reporter to mark this Plaintiff's Drake Exhibit 38.

(The document referred to was marked Plaintiff's Drake Exhibit No. 38 for identification.)

By Mr. Freed:

Q. For the purposes of this comparison, Mr. Drake, I would ask you to ignore the difference in the total cost of the project as reflected by these two different documents. In one case the project is around $7,700,000. On Exhibit 38 the total investment is $7,129,000.

Assuming, however, that the total figure is the same, is it not correct that the calculation made in item seven, page 2, Exhibit 35, excludes the borrowed portion of the investment in a 25,000 ton plant from consideration in determining Pennsalt's investment. Whereas, on Exhibit 38 the same exclusion is made, namely, Pennsalt is attributed with an investment of one and one-half million dollars even though its share of the venture is one-half of seven million plus. Is that correct, sir?

A. What you have said is correct.

Q. Would you explain to us why it is correct to exclude the loan from consideration in Pennsalt's investment on [fol. 1594] Exhibit 38, but it is incorrect, as I understand your testimony, to exclude the loan on Exhibit 35?

A. On Exhibit 38 in which Pennsalt's investment is shown as $1,500,000, that is all of Pennsalt's investment in a subsidiary of which it owns only 50 per cent. According to my understanding of accounting practices, in a non-wholly owned subsidiary, even though that subsidiary may borrow moneys, it is not necessary for the parent or parents to show on its books that liability, namely, the borrowed funds.

Therefore, neither that liability which becomes a part of the investment of that subsidiary, nor the liability which is the investment of the co-partner, needs to be shown on Pennsalt's books nor on the other parent's books, except for their share of the actual investment which, in this case, would be $1,500,000.

That is one of the important factors in the consideration of a joint venture on chlorate, the fact that our total investment and the total investment of Mathieson each is only $1,500,000 and even though a jointly owned subsidiary may borrow substantial sums, still the obligation, according to accounting practice, is that of the subsidiary and not of the parent, either parent.

Mr. DeLone: So long as there is no guarantee.

[fol. 1595] The Witness: So long as there is no guarantee on the part of either parent.

Contrary to that, obviously, perhaps I need not go any further——

Mr. Freed: Please do.

The Witness: If either company, or let's limit this to Pennsalt, if Pennsalt were to invest in a plant roughly $7 million referred to as the cost of this plant, it would be wholly owned by Pennsalt and, therefore, any liabilities of that operation, even though it might be a subsidiary, it would be a wholly owned subsidiary, is an obligation of the parent. The source of the funds used in the construction of that plant is immaterial.

You must take the overall picture in the parent company in respect to its borrowings; those borrowings, in whole or in part could be allocated to a chlorate project or a plastic project or any one or several projects, and you're only kidding yourself when you say that, well, these nearly $4 million were borrowed solely for this project and therefore for this project you only have to charge it with the six per cent interest that you would pay for that money. Accounting-wise you just cannot do it. Do you dig me?

Mr. Freed: I think so, sir.

(Laughter.)

[fol. 1596] By Mr. Freed:

Q. Would your answer be different if the loan made to or on behalf of Pennsalt in the financing of Penn-Olin Chemical Company were a loan guaranteed by Pennsalt?

A. I believe that if the loan to Penn-Olin, which let's assume is a jointly-owned company, is guaranteed half by Pennsalt and half by Olin Mathieson that in addition to the million five that each company is putting in as capital we would probably have to show as an obligation of the two parent companies the relative half shares of that loan.

Q. In that event, sir, would the calculations on Exhibits 35 and 38 be comparable? In other words, on this assumption that the parent companies do guarantee the loans, the basis on which the return on investment is computed in

Exhibit 35 would be as valid as the basis on which it is computed in Exhibit 38; is that correct, sir?

A. Let me answer it this way. If I understand your question correctly, if you look at the right-hand column on Exhibit 35 where it shows for Pennsalt a 31 per cent return——

Mr. DeLone: That's Exhibit 38, I believe.

The Witness: Is it, I beg your pardon.

By Mr. Freed:

Q. The later date is the later Exhibit.

A. I'm talking about this one here.

Q. That's 38.

[fol. 1597] A. 38, I'm sorry.

Where the return is shown as 31 per cent for Pennsalt on its million five, and we assume that the borrowings of Penn-Olin were equally guaranteed by Olin Mathieson and Pennsalt, we then guaranteeing half of the loan which is approximately $4 million total, or $2 million one-half, in order to calculate Pennsalt's return you would add to the million five Pennsalt's half of the loan, or another $2 million.

Therefore, the income to Pennsalt which is shown as $460,000 would have to be divided by not one million, five, but three million, five to show our rate of return on Pennsalt's investment.

Q. Then if I understand you correctly, sir, the critical element that enables Pennsalt to show a highly favorable return on investment in Penn-Olin, as indicated by Exhibit 38, is the ability in the joint venture format to have secured a loan without guaranteeing it, without Pennsalt guaranteeing it?

A. That's the nubbin of it.

Q. At the time the joint venture was negotiated between you and representatives of Olin, was the securing of an unguaranteed loan, unguaranteed by either parent, a prerequisite to the venture proceeding?

A. Yes, sir.

[fol. 1598] Q. And had your joint venture format been unable to achieve the securing of unguaranteed loans, there

would not have been a joint venture, at least as far as Pennsalt was concerned; is that correct?

A. That is a very reasonable assumption.

Q. I would like next, sir, to direct your attention to a memorandum dated September 6, 1960 to you from W. Cooper Willits on the subject, "Penn-Olin Chemical Company", which the reporter will mark Plaintiff's Drake Exhibit 39.

(The document referred to was marked Plaintiff's Drake Exhibit No. 39 for identification.)

Q. Directing your attention, Mr. Drake, to paragraph numbered 4 of Exhibit 39, and in particular to the last sentence, which states:

"I wouldn't particularly dwell on this point in that the Board recognized at the last meeting that while no formal guarantee might exist, there certainly would exist a moral obligation insofar as protecting the credit position of Pennsalt."

Can you tell us whether Pennsalt, in fact, recognized and recognizes a moral obligation to guarantee or stand behind its portion of the loan in Penn-Olin?

A. The Pennsalt Board and the Pennsalt management have been operating the company now for close to 111 years, and during that period of time I believe past Boards and [fol. 1599] past managements have built up, possibly the current Board and the current management have contributed to a feeling of dependability, of honor and moral stature in Pennsalt which we would defend vigorously. Therefore, I think that both the Board and the management recognized that although from an accounting standpoint, from a legal standpoint, there would be no obligation for this partially owned subsidiary's debt, it could not morally jeopardize the hard-earned stature, if you will, that had been built up over so many years by reneging on an obligation such as this.

I trust that answers your question.

Q. It does, and I thank you, sir.

Can you tell us then why it was of such importance to Pennsalt that it be able to secure an unguaranteed loan,

apart from the accounting principles that you have expounded previously?

A. In the appraisal of this and such other investments of this type, I'm not saying solely joint ventures now, we have been willing in our investment policy, although there is nothing written into the policy to this effect, to consider that although morally we feel that we would have an obligation to stand behind this type of a venture from an investment policy standpoint, we don't calculate the loan of an unguaranteed subsidiary in the capital investment on which we base our return, or our share of the return.

[fol. 1600] Q. Returning for a moment to Exhibit 35 and item 7 thereon, would the calculation of return on investment in item 7 there have been valid for Pennsalt, had it been able to set up a sodium chlorate plant at Calvert City to produce 25,000 tons of sodium chlorate a year as a subsidiary, which subsidiary was able to secure from a bank or other lending institution a loan unguaranteed by Pennsalt, the parent?

A. No, it couldn't.

Mr. DeLone: You referred to 35. You mean 32, I'm quite sure.

The Witness: No, 35.

Mr. Freed: It is 35.

The Witness: 35, item 7.

No, we couldn't, because it would be a wholly-owned subsidiary and the obligations of a wholly-owned subsidiary automatically become the obligations of the parent.

By Mr. Freed:

Q. Can you tell us why Penn-Olin, as a 50-50 joint company, was able to secure an unguaranteed loan, as indicated in the financial statements and particularly Exhibit 38?

A. To my knowledge it has not been able to secure an unguaranteed loan.

[fol. 1601] Q. Absent the effect of litigation on Penn-Olin then, what are the factors which would enter in, as you see them, into a determination by a bank or lending institution to loan money to Penn-Olin unguaranteed by the parents?

A. First they would obviously be interested in who the

parents were and the extent of their respective investments; is it sufficient to encourage them to make this a successful project, not leave the bank holding the bag, as it were.

Secondly they would want to know, obviously, the economics of that project. They would want to know the market potential for the product of that venture and the likelihood of the parents, or rather the joint company, being able to get tonnage required to make the venture a success, not necessarily a profitable venture so far as the bank is concerned, except enough profit to pay their interest and to amortize their loans which would be done through the depreciation of the plant.

Therefore in the economics study they would want to see whether there was enough, as the banker expresses it, cash throw-off to assure the bank of getting out under the terms of their loan to the subsidiary.

Q. Even in the case of an unguaranteed loan to Penn-Olin, would you expect the bank or lending institution to look to the financial resources and standing and reputation [fol. 1602] for standing behind the debts of the parent companies, even though there would not be any more than a moral obligation to connect those attributes to the joint company?

A. I'm sure that any banker would look more favorably upon a joint venture to which they were lending money if the parents were reputable, sound organizations. I doubt that a Penn-Olin venture type would get much money from a bank if the parents were, to put it in a matter of slang, fly-by-nights.

Q. I think your testimony in this particular area has been eloquent and leaves me speechless and I will pass on to another area.

(Laughter.)

I would like next to direct your attention, sir, to a memorandum of April 20, 1959 to Dr. LaLande from yourself on the subject, "Sodium Chlorate and Ammonium Perchlorate Plants". I would ask the reporter to mark this Plaintiff's Drake Exhibit 40.

(The document referred to was marked Plaintiff's Drake Exhibit No. 40 for identification.)

Do you recall, Mr. Drake, the circumstances which existed when you wrote this memorandum to Dr. LaLande?

A. Doesn't that tie into what we were looking at not long ago on the letter from John Logan, where he said the power [fol. 1603] costs at Brunswick weren't any good, and then wasn't there a note on the side of the memorandum that I informally told LaLande, and I think this was just satisfying him for the record that he's not to do anything more in Brunswick.

Q. That note was on April 10, 1959 and this memorandum is 10 days later.

I refer you to the language which states:

"You are correct that the Brunswick site has recently been eliminated from further consideration. For the present I see no reason for you to do any additional work on this pending receipt of word from Mathieson relative to a site they are evaluating in Alabama which they believe will be superior to Brunswick."

As of the time this memorandum was written, had Pennsalt made a decision not to proceed alone and only to enter the sodium chlorate business with Olin?

A. The sodium chlorate alone decision, leave the perchlorate out of it, was made back in '57, that we wouldn't proceed.

Mr. DeLone: Wouldn't proceed alone.

The Witness: Alone. I don't recall that any decision had been made at this stage of the game as to a combination chlorate-perchlorate plant.

[fol. 1604] By Mr. Freed:

Q. Had any decision been made at this time as to Pennsalt's entry into chlorate—perchlorate on its own?

A. That's what I meant to say.

Q. Had such a possibility yet been excluded from Pennsalt's own thinking?

A. No, I don't think so.

Q. Then is it fair to conclude that at least as of the date of this memorandum Pennsalt was still a potential entrant into the chlorate-perchlorate business on its own if economic studies bore out the desirability of such a project?

A. I think "potential" may be a little strong there. I would describe it more as a "possible". There was the possibility but, as I think we have covered over the deposition, a waning possibility.

Q. But as of this date the possibility has not been foreclosed?

A. I think that's correct.

Mr. Freed: I would like next to refer to a memorandum dated November 17, 1959 from William P. Drake to Messrs. H. C. Land and W. A. LaLande, to be marked Plaintiff's Drake Exhibit 41.

(The document referred to was marked Plaintiff's Drake Exhibit No. 41 for identification.)

[fol. 1605] By Mr. Freed:

Q. Can you recall from Exhibit 41 your conversation with Fred Shanaman with respect to his conversation with Olin?

A. My recollection is that while I was out on the west coast with Fred Shanaman he was—or expressed some concern, particularly in the light of Olin's request for additional chlorate, as to just what we were going to do with Olin because his demands for chlorate in the northwest were pressing him and he didn't want to continue to supply additional quantities, particularly to Olin, if it wasn't going to serve our purpose.

Now it could serve our purpose either with a possibility of a joint venture with Olin, or it would serve our purpose if we withdrew it from the market, having decided not to do it alone. I'm speaking now of chlorate in the east. He could put it to more profitable advantage up in the northwest. I think that's the gist of that.

Q. Do you recall whether in the course of your conversation with Mr. Shanaman out on the west coast he alluded to any joint venture discussions with Olin? Had he broached the subject in his prior contacts with Olin?

A. I don't know. I would imagine he probably would

have. It would have been discussed with Olin, between Fred and Olin.

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[fol. 1606] Q. I would like next to show you a memorandum to yourself from N. M. Walker, dated December 14, 1959, entitled, "Chlorates Eastern Plant", and marked as Plaintiff's Drake Exhibit 42.

(The document referred to was marked Plaintiff's Drake Exhibit No. 42 for identification.)

Can you tell us, sir, first who Mr. N. M. Walker was?

A. He was administrative assistant to me.

Q. Can you recall the circumstances that led to your request for this resume?

A. It could well have been in the notation I put on that memorandum you showed me recently of the 11/30 note that it came out in my file at that time and I asked him to review it, to try to condense in one place, have a person who had not been connected with it before, condense in one place the pertinent facts, and in his eyes what he thought the situation was as of that date.

Q. Would Mr. Walker's memorandum indicate to you that in fact it is not likely that the subject of chlorates in the east was discussed in a management meeting on November 30 due to the fact that no mention is made of any meeting or any document?

[fol. 1607] A. I think that's implied here. I couldn't vouch for it but it certainly is implied.

Q. And is Mr. Walker's review for you in Exhibit 42 a review which you accepted as an accurate summary of the events to date in the matter of chlorates eastern plant?

A. I think he gave me exactly what I wanted. It was a fresh look and he condensed in pretty good shape what appeared to be—it appeared to be where we stood on chlorates at that time.

Q. The final entry in 1959 is a memorandum to you from Mr. Land dated December 30, 1959 and marked Plaintiff's Drake Exhibit 43.

(The document referred to was marked Plaintiff's Drake Exhibit No. 43 for identification.)

Can you tell us when Pocono Manor meetings referred to in the first paragraph of Mr. Land's memorandum took place?

A. That was in October, I would think. In this connection I think, it points out in this memorandum there was no mention of chlorates at those meetings. This was a meeting of the management committee, incidentally.

Q. The management committee to which you referred and named previously?

A. Yes.

Q. In item 2 on page 1 Mr. Land refers to the fact:

[fol. 1608] "Chlorate alone would have to include a partner who is willing to supply 50 per cent of the capital at six per cent."

In light of the discussion which we have had this afternoon and yesterday, how can you explain this continual reliance on borrowing money at six per cent as a way in which people high in the Pennsalt management thought of a partnership in sodium chlorate?

A. Well, in justice to Hugh Land I think he knows better than to put it in those terms. Maybe I'm being overindulgent with him but I think he knows more about accounting than he indicates in that second paragraph as is written. Now he may have had in mind as he wrote it a joint venture where—well, similar to what finally was finalized in the Penn-Olin type, but I repeat what I've said several times in the past, that this item 2, as it's stated, is not in the cards, never has been. As far as I know it never will be on this or any other project.

Q. When you use the term "not in the cards" are you referring to the possibility that Pennsalt might borrow 50 per cent of the fixed capital for a project from an outside lending institution, or are you referring to the accounting practice demonstrated by some of the documents here of not including borrowed funds as Pennsalt investment in a return on investment calculation?

[fol. 1609] A. I'm glad you raised that question because, obviously, I meant the latter. I'm sure we will, from time to time, borrow moneys but not for a specific project and account for it in that fashion.

Mr. Freed: I wonder if we could take a five minute break.

(Recess.)

By Mr. Freed:

Q. I believe you have previously referred, Mr. Drake, to a meeting with Olin in New York in January of 1960 at which the question of the joint venture was taken up, and the date of that meeting, as will be indicated in a document that I can introduce into evidence a bit later, was January 21st.

Can you enlighten us on the sequence of events between the end of 1959 and January 21, 1960, by which the meeting between Pennsalt and Olin in New York to discuss the joint venture came about?

A. My recollection is that probably Hugh Land and John Logan discussed this. But what was that date in New York?

Q. January 21.

A. January 21st?

Q. Yes, sir.

A. Does anyone have a calendar for 1960?

Q. It was a Thursday.

[fol. 1610] A. I wanted to see what Thursday it was.

(Mr. Subak handed a calendar to the witness.)

My guess is that probably John and Hugh Land ran into each other at the Chlorine Institute meeting in New York which I think probably was either the latter part of the week of the 11th or the first part of the week of the 18th. Incidentally this could well have been—now it comes back to me a little—in this regard it could well have been when I talked to John Logan—before lunch—remember before lunch I was trying to determine when I might have talked with him in January of whatever the year was. These Chlorine Institute meetings are the annual meetings always in New York in January, and it could well be that meeting where I saw him.

Q. That meeting in 1959?

A. Yes. I remember I referred to it as an industry meeting, and its the Chlorine Institute, I know, meets then, and I think both may have been the times when first I talked with John and then later Hugh talked with John. I don't

think I attended the Chlorine Institute meeting in 1960, in fact I'm pretty sure I didn't, so it must have been Hugh.

Q. And after the meeting between Messrs. Land and Logan at the Chlorine Institute, did Mr. Land come and report to you on his conversation?

[fol. 1611] A. If it was the week of the 18th he well could have called me on the phone and have stayed over there, because the meeting was in Olin Mathieson's office, wasn't it, on the 21st? Isn't that what they said?

Q. Yes, sir.

A. So that could well have been it, to explore with Olin Mathieson, and I think this is the first meeting that Mr. Block was in attendance, and for a very, very brief period, Mr. Osborne. He just poked his head in and said, "Hello" and out he went, and this was this 21st of January meeting.

Q. Then prior to the 21st of January you are aware of no other meeting between Pennsalt and Olin personnel in 1960 apart from the one you have just mentioned leading up to this meeting?

A. No. There could well have been but I don't recall it, and I am in a sense guessing that this may have been the mechanism that set off the plan to have the 21st meeting.

Q. I would like to show you a memorandum to the file by Mr. Clem dated January 5, 1960 entitled, "Pennsalt—Olin Mathieson Sodium Chlorate", which will be marked Plaintiff's Drake Exhibit 44.

(The document referred to was marked Plaintiff's Drake Exhibit No. 44 for identification.)

[fol. 1612] Mr. DeLone: I think you said January 5. You meant January 25 I believe.

By Mr. Freed:

Q. Does Mr. Clem's memorandum refresh your recollection as to the conversations which took place in Olin's New York office on the 21st of January?

A. I'm not quite as hazy on this one as I have been on some of them. That leaves plenty of room for haze, I'm afraid.

Q. Can you recall, sir, how long the meeting lasted?

A. Oh, I think we got there about 10:30-11:00 o'clock.

We enjoyed one of Mr. Block's rather unusual luncheons which was served in the conference room. I think it lasted until about 2:00 or 2:30.

Q. On the basis of the brief notes made by Mr. Clem, coupled with your own recollection, can you tell us which party made a proposal and what that proposal was?

A. I can't recall who specifically spoke first, as it were. I'm sure that each of us approached this meeting with a similar thought in mind, to explore whether there really was an opportunity for a joint venture. Now who actually opened the conversation I really don't recall.

Q. Can you recall whether there were any major items of policy that drew the attention of the parties for the [fol. 1613] principal part of your meeting?

A. Most of the items here listed in the memorandum of January 25th are details, important ones, but details. I would imagine that what took as much of the time of the meeting as anything would be a preliminary exploration of the financial reasons why a joint venture would be attractive to both Olin and ourselves, this mechanism that we've dealt with many times in the last couple of days.

Q. As you can now recall it, did the parties approach this meeting with the assumption that the joint venture was desired by both, the only question being whether it was economical and what the details would be?

A. No, I'm pretty certain that we approached it with the idea of exploring with the two companies, between the two companies, whether or not there was really an area of mutual benefit in chlorates via the joint venture.

Q. Then despite all of the conversations and commercial relationships which had gone on in the preceding years, the parties did not approach this meeting with a view toward simply cementing a joint venture which had been decided on previously?

A. I don't think so, even at that stage. You, unfortunately, never met and, unfortunately, cannot meet Mr. Block. To my knowledge this is the first time Mr. Block ever came into the picture. Mr. Block was a very fine [fol. 1614] substantial element, in my estimation, in the Olin Mathieson organization. I got the impression, which I still retain, that Mr. Block may not have concerned himself —he was the head of the chemicals division at that time—

may not have concerned himself to any great extent with what "the boys" might have been playing around with. I think really what must have happened, this is obviously conjecture, but I think it's a reasonable conjecture, is that somebody finally got Mr. Block's ear and he said, "Let's have a look at it."

To give you a little more background, Mr. Block I think was primarily a production man, his background was production, although he had good commercial instincts, but the impression was that he was a very influential person in the Mathieson organization, Olin Mathieson organization, a man of few words and, as evidenced, a man of, well, either let's get it done or forget it.

Q. With reference to the subject of plant location, reference is made in Mr. Clem's file memorandum, Exhibit 44, to Calvert City, Kentucky and Chattanooga, Tennessee.

What can you tell us about the consideration given at the meeting to these two locations?

A. They're both on the TVA, therefore both have available the low cost power that's required for a plant. They being the only two—I won't say that, Calvert being our [fol. 1615] only plant on the TVA. I'm not certain about Olin Mathieson but I know that they had an operation at Chattanooga and were contemplating the possibility of expanding that operation. I don't recall whether they ever did, but they did mention they were thinking of expanding it from, as I recall it, the facilities at Calvert being a going electrolytic entity, were weighed against the advantages of Chattanooga, those advantages being closer proximity to some of the markets which we would be covering with chlorate. They, however, had the disadvantage of not having an electrolytic operation there. Salt is one of the ingredients for sodium chlorate and I believe I'm correct, there was no salt being brought into Chattanooga at that time. We were bringing salt and still are by barge to Calvert.

But before any decision could be made we undertook these studies as to which was the better location.

Q. When you refer to the proximity of Chattanooga to some of the markets, what did you have in mind as the markets?

A. Largely the pulp and paper industry.

Q. Were other potential markets for sodium chlorate discussed?

A. Not to any degree. I don't think they even discussed it at the first meeting.

Q. The focal point of attention was on pulp and paper? [fol. 1616] A. (Nodding head.)

Mr. DeLone: Did the witness answer that?

The Witness: I shook my head, I'm sorry. Yes.

I think there's another recollection which might be helpful to you of this meeting. The approach that we both expressed, as to location of plant site and any other aspects of this thing, was that if it were to be a successful venture both of us would have to look upon it as what was best for that particular venture. If the economics, for example, said that Chattanooga was the better location for the plant, we would choose Chattanooga, just as if after the technical group evaluated the various methods of manufacturing sodium chlorate the economics—I'm speaking broadly now—dictated that it should be the Vickers-Krebs cell, we'd put the Vickers-Krebs cell in.

I merely cite this as the approach that the two companies took to this venture and I think it's rather significant.

By Mr. Freed:

Q. In terms of Olin's mention of Chattanooga, did they indicate at that time the kind of plant they were contemplating building at Chattanooga?

A. As I recall it was an electrolytic process, that is as much as I recall of that.

Q. As you recall it, did the Pennsalt witnesses advocate [fol. 1617] Calvert City and the Olin personnel advocate Chattanooga or did they come up in a more neutral context?

A. My recollection is those obviously in Pennsalt who were most directly connected with the operations at Calvert definitely would like to see the plant at Calvert. I don't recall that there was anyone there from the Olin Mathieson group that was as directly connected with Chattanooga as, say, Hugh Land was with Calvert City.

Q. Then at this particular meeting the two locations were just thrown up as alternatives?

A. With no foregone conclusions as to where to go.

Q. And no decision was reached?

A. None whatsoever.

Q. With respect to the sodium chlorate cell to be used, who brought up the subject of the Krebs cell?

A. I imagine that Olin Mathieson brought up the Krebs cell.

Q. As you recall it had Pennsalt had any experience with the Krebs cell or made any study on it?

A. We knew something about it. Of course we've always tried to keep abreast of how the possible cells might do.

Q. Do you recall the extent of experience with the Krebs cell that any of Olin's people might have talked about?

A. No, I don't. There was not too much time devoted [fol. 1618] to either Krebs or the Pennsalt cell at this meeting particularly, because I think it points out here that—well it doesn't in this memorandum, but I think subsequent to this a technical task force was set up and a sales task force was set up to evaluate these things. I know that was true in the case of the technical task force.

Q. With respect to the subject of operations, paragraph number 3, the first sentence indicates:

> "After considerable discussion it was agreed that probably the best arrangement would be for Pennsalt to make the product and for O.M. to sell it."

Can you recreate for us the issues that were discussed before this conclusion was arrived at?

A. I think the issues undoubtedly were, who is best qualified to do what, who had the know-how, experience.

Q. And was it in this context that Pennsalt referred to or relied on its own production experience and that Olin pointed to its own background in sodium chlorate production technology that you referred to yesterday?

A. I'm sure it crept into here. I mean, after all, we were each putting our best foot forward and we were undoubtedly saying how much we knew about the manufacture of chlorate. We were even saying, I'm sure, in these negotiations how much we knew about the sale of chlorate. [fol. 1619] Again you have to take that statement in light of the negotiations, as it were, that were going on.

Q. As you can recall it, did Pennsalt give any estimate

of its own sales capabilities here as being able to contribute to the selling operations of the joint company?

A. I don't think it got that far on this meeting.

Q. Can you recall who took the lead in promoting Pennsalt as a potential seller?

A. Since I didn't have to sell it I probably did. I mean I wouldn't be responsible for selling it, so obviously each of us, as I said before, was trying to put his best foot forward.

Q. And that would characterize pretty much the negotiating technique of both sides with respect to both selling and producing——

A. Yes.

Q. —sodium chlorate?

A. Yes.

Q. Mr. Clem makes note of the possibility that Pennsalt might act as sales agent in certain geographic areas. To what did that have reference?

A. It could have had reference to the agricultural chemicals field; it probably did. How those differed geographically from the pulp and paper field I'm not particularly clear in my mind.

[fol. 1620] Q. Was there any conclusion or tentative conclusion reached at this time as to Pennsalt being a selling agent in some areas?

A. No conclusion was drawn then, no.

Q. The reference that is made here to the Sun-Olin venture, can you tell us what relevance that had to the discussions that were taking place? What from the Sun-Olin venture was of value as a precedent in terms of the kind of venture you were setting up here?

A. I think that refers to simply the financial mechanism —I'm not familiar with it even to this day of what the Sun-Olin financial venture is, any of the Sun-Olin venture. I think it probably also dealt with, preliminarily, with who did what in the Sun-Olin venture.

As I recall it I think Sun produces the stuff and Olin sells it; I don't know.

Q. With reference to the arrangement for producing and selling the product that we referred to before, was there any definite decision reached at this time even on this question? It says here it was agreed it would probably be the best arrangement for Pennsalt to make it and Olin to sell it.

A. I think it states it was just leaning toward the likelihood that's the way it would be set up, but until we had really looked into it we could both keep an open mind [fol. 1621] on it.

Q. How did it happen that Pennsalt won out in terms of getting its name first in the joint company's name other than the obvious harmony of the name as it came out, Penn-Olin?

A. I think it's a combination of the harmony of the name and the graciousness of Mr. Block.

Q. The last line of Mr. Clem's memorandum on page 2 refers to other questions raised at the meeting which were:

"Matters of policy to be resolved between Messrs. Block and Drake."

what was——

A. I'm sorry, I lost you.

Q. The very last line of the second page of Exhibit 44.

A. Undoubtedly that's referring to the matter which I said probably took up most of the meeting, namely, how will you structure the thing financially.

Q. Are there any other important areas of discussion that took place at this meeting in New York that you can recall in light of the discussion we have had about Mr. Clem's memorandum?

A. I think he covers it pretty well here. I don't recall any others other than what I just mentioned.

Q. When was the next time that you participated in a meeting with the Olin representatives with respect to the [fol. 1622] joint venture?

A. I think our next meeting was February 11th. I think it was scheduled for February 11th. I don't know whether it took place then or not; I don't remember the date.

Q. I believe that was the day on which the agreement, the joint venture agreement was signed.

Then between the 21st of January and February 11 you personally did not participate in the negotiations with Olin; is that correct?

A. That is correct, as I recall it.

Mr. Freed: I would like to have the reporter mark as Plaintiff's Drake Exhibit 45 a document which appears to be in Mr. Drake's handwriting that is not otherwise identi-

fied and I will attempt to identify it by your examination of it.

(The document referred to was marked Plaintiff's Drake Exhibit No. 45 for identification.)

By Mr. Freed:

Q. You will note that in the upper right-hand corner I have written "Drake 2/4/60", but I do not wish you to be prejudiced in your evaluation of that document by our speculation as to you as the author and the date on which these notes were taken.

A. I think this is—this is my writing and I'm sure that this is my attempt to jot down for my own and Mr. Willits' [fol. 1623] benefits some ideas as to how we might approach our next meeting with Olin Mathieson.

Q. In other words, Exhibit 45 is not the notes that you took at any particular meeting, but rather the notes that you made as a preliminary for the neogitations?

A. I think actually with this D-11—W-1, to me that indicates that this is an informal chat I had with Cooper Willits and these are our ideas as to how we might approach the next meeting.

Q. Would you be good enough, Mr. Drake, to read into the record the remarks which are handwritten on Exhibit 45?

A. "1. O.M. finance plan. 2. Pennsalt build and operate plant at fee. 3. O.M. sell output except to Chipman and Ag-Chem on which Pennsalt to get a commission on sales. 4. Pennsalt's fee to be based upon a capitalized 'know-how' and services. b. 200,000 per year management fee. c. Per cent of any reduction in cost due to identifiable efforts on our part e.g., yields.

"Assuming we capitalize our investment (know-how and services) we should show a 25 per cent return before taxes."

* * * * * * *

[fol. 1624] Mr. Freed: I'm concerned lest Mr. Drake not be able to completely decipher his notes because of the quality of the document, but if he's been able to—

The Witness: No, I think I got it all right. I can add

something more to this because it's got Cooper Willits' phone number on it and this is the result of a phone conversation between me, undoubtedly at home, and Cooper Willits, and that's why the "D-11 to W-1", that's what it is. But I'll be darned if I know the date. Is this your guess as to the date?

By Mr. Freed:

Q. That was my guess. Now I have reason to believe that it's wrong but I don't know what the correct date would be. At the time we put the date down we had a mass of documents around the time when meetings were going on and when we classified them for the purpose of putting them in notebooks.

A. Well, if you have this, we must have it somewhere.

Mr. DeLone: Oh, yes.

The Witness: I would hope. Maybe we can find out what the date is.

Mr. DeLone: Offhand I don't believe there is any date on it.

By Mr. Freed:

Q. Does the reference in these notes to "O.M. finance [fol. 1625] plant" refer to a proposal by Pennsalt that Olin put up the money for the venture or—

A. I don't think this proposal was ever made, you see.

Q. Can you tell us which, if any, of the items on this list were actually proposed by Pennsalt in any of the meetings to your knowledge?

A. To my knowledge I don't think any of them were, actually. These were some notes. As I recollect now that I was at home in the evening thinking various ways that we could approach this thing and I called up Cooper and said, "Here's an idea", and it's obvious we never proposed it.

Q. The reference to Olin selling the output except to Chipman and Ag-Chem. What was the basis on which you made the note concerning Pennsalt's possible sale of the output of sodium chlorate to Chipman and Ag-Chem?

A. Because we felt that we probably had particularly better ability to sell in the agricultural chemicals field which includes Chipman.

Q. Is Chipman the largest of the agricultural chemical companies?

A. Chipman, among their other activities, they're in the agricultural chemicals, and among their other activities they have, particularly in the west, sold for many years our chlorate to the railroads for weed killing along the rights-of-ways. So we felt that our relationship with Chipman [fol. 1626] probably was a stronger one than that of Olin Mathieson.

Q. Do you recall how that particular phase of the negotiations worked out, as far as Pennsalt's receiving the right to sell to Ag-Chem users, including Chipman?

A. I don't think it has ever been resolved. That doesn't say it hasn't but I'm not aware of it.

Q. Turning your attention, sir, to the meeting on February 11, 1960, the date on which the joint venture agreement between Pennsalt and Olin was executed, how was the question of location of the plant resolved?

A. I'm not sure it had been resolved at that point. Had it or was it or had it been resolved? I don't recall. Are there any minutes of that meeting?

Q. Do you happen to have a copy of the press release with you? I don't have it here, I do have in my own office.

A. Maybe it had been resolved because I think maybe the press release did indicate where we were going to put the plant.

Q. My recollection, sir, is that it did.

A. As I think further on, I think it did.

Q. Do you recall the reasons why Calvert City was chosen over Chattannoga?

A. As I recall it Chattanooga showed some freight advantages but the combined task force felt that the advantages of an electrolytic plant at Calvert, with salt coming [fol. 1627] in, the facilities all there, and many of the services, that we could much faster build a plant and have it in operation at Calvert than we could at Chattanooga, and that advantage offset some freight advantage that might accrue to the Chattanooga plant.

Q. Why was the element of time important, as you can recall the discussion?

A. Well I'm certain that the recognition, as has been brought out in these meetings yesterday and today, that

if we were going to go ahead we had jolly well better get our plant built and get about our business, because after all, we were creating a new competitor, and we had some pretty stiff competition already in the field. The wisdom of that is further brought out with the addition of then another competitor, as you brought out yesterday, and a pretty sizeable one at that, incidentally.

Q. You are speaking now, sir, of Pittsburgh Plate Glass?

A. Yes.

Q. In characterizing them as sizeable are you referring to the size of the Pittsburgh Plate Glass Corporation as a whole?

A. Both that and its chemical operations.

Q. Do you have any knowledge of the size of the chemical operations of Pittsburgh Plate Glass?

[fol. 1628] A. No, as I indicated yesterday I think it's quite substantial but I don't think they've ever broken down what their chemical sales are, the total.

Q. I believe I have showed you earlier, though it has not been marked for identification, a draft statement (handing document to the witness) which is typed with some hand-written interlineations and at the top it says, "For Board", the last sentence of which I would appreciate your reading and then explaining what the background of it was.

A. "Timing is of extreme importance because the market area considered can only handle one more significant producer at this time."

Q. Can you recall the circumstances in which that factor first entered into any of the discussions to which you were party?

A. Well, at that time I think we knew, as has been brought out in the testimony in the last couple of days, the interest of Wyandotte Chemicals, who had recently or fairly recently built a plant in Geismar, Alabama—not Alabama, Louisiana. We had heard, as was brought out in the testimony in one of those memoranda, that possibly Solvay and American Potash arrangement on their sales arrangement might be terminated, the implication being that Solvay might decide to build their own plant, and there may have been others I don't know, but certainly there were indications that others were or might be considering [fol. 1629] a sodium chlorate plant in the southeast or in the south. I'm sure that with that information in mind, and

having decided finally that we had found a mechanism for proceeding with the chlorate plant after many years of study and the like, the logical thing to do was, once having made up your mind to do something let's do it. And I think that's all that that—I know that that's all that that last sentence states or implies.

Q. Was it your hope and contemplation at the time Penn-Olin was formed that its announcement and its creation would at least save you from facing any additional competition in that market than that which already existed?

A. Let me answer that this way. It was our belief that the southeastern market could stand one more supplier. Now assuming that one of the others who was contemplating going into the southeastern market had come to the same conclusion, I think if I were in their shoes and I read of an announcement of that fourth supplier, I would certainly take a second look.

Q. I believe you referred to a fourth supplier. Who were the other three?

A. Did I say fourth? Oh, Hooker, Potash, and what was the third one—well, that's silly.

Well, there's where I slipped. I didn't mean to say fourth [fol. 1630] supplier, another supplier.

Q. At the time your venture agreement was signed mention was made of other chlorates and perchlorates that Penn-Olin was interested in, with particular references to ammonium perchlorate.

Mr. DeLone: You mean in the agreement itself, are you talking about, mentioning the agreement itself? Just so I understand your point of reference.

Mr. Freed: Yes, sir, I believe that's correct.

By Mr. Freed:

Q. With reference to ammonium perchlorate can you recall any specific discussion in your meetings with Olin as to the construction and operation of an ammonium perchlorate plant in conjunction with the sodium chlorate plant?

A. The only discussion I can recall at that time was that when, in defining the scope of the activity of the Penn-Olin venture, the possibility of making ammonium perchlorate and possibly potassium chlorate was considered although

I think we both quickly agreed that that would be something that we would put down the road, particularly in light of our knowledge at least of perchlorate not being in the demand that back a year or two we thought might develop. [fol. 1631] Q. Is it a fact then that with respect to the production of any derivatives of sodium chlorate that matter was left for future agreement by the parent companies of Penn-Olin?

A. First let me say that I don't know of any other, that I can recall any other derivatives of sodium chlorate although I could be wrong on that and probably am. I think we felt at the time that we, or the board of the joint venture, would evaluate either an expansion of chlorate or the extension of our chlorate operations into these derivatives that you speak of on their merits at the time at some future date when they might be proposed.

Q. With respect to the geographical area in which Penn-Olin would operate and in which its sales would be made, was there any—what do you recall of the discussion with respect to the sales area of Penn-Olin?

A. I think we all recognized that the bulk of the sales would be made in the southeast, it being the logical market area for a plant in that location.

Q. Was there any discussion of the potential conflict between the selling operations of Penn-Olin and of the then existing marketing operations of Pennsalt in the west?

A. To this degree only, that both Penn-Olin and Pennsalt in their respective operations would probably—well, let me restate that a little—that's all right—would probably [fol. 1632] find themselves in competition in some areas and that in such instances each organization, that is Penn-Olin and Pennsalt, would naturally take care of its own interest.

Q. In other words to the extent that there was any overlap—

A. They would be competitors.

Q. It would be an overlap rather than avoidance of it?

A. Absolutely.

Q. In this regard what, if anything, was said about the Ag-Chem field and Chipman about which some of the Pennsalt people had previously expressed a desire to maintain as customers?

Mr. DeLone: The previous reference was, as I remember it, what you referred to was Pennsalt acting as a sales agent for Penn-Olin in those matters.

Mr. Freed: I thank you and I withdraw the question.

By Mr. Freed:

Q. With respect to sales to the agricultural chemical market and to Chipman, what was the discussion at the February 11th meeting with regard to Pennsalt acting as sales agent?

A. I'm not at all certain it came up at that meeting. If there has been any discussion of it at all I think it has [fol. 1633] probably been at the level of the task group working on the sales end of it.

Q. I believe you've already testified that you were not aware of the disposition, if any has been made, of that particular subject?

A. No.

This is yours, incidentally.

(Returning document to Mr. Freed.)

Mr. Freed: Perhaps to keep the record straight I would ask the reporter to mark as Plaintiff's Drake Exhibit 46 the draft document previously presented to Mr. Drake and from which the last sentence was read into the record.

(The document referred to was marked Plaintiff's Drake Exhibit No. 46 for identification.)

By Mr. Freed:

Q. Turning back for a moment to the question of Chattanooga, did I correctly understand you to say that the reason for Chattanooga's rejection in favor of Calvert City was that the element of time and the availability of existing facilities tipped the balance in favor of Calvert City despite the freight advantages which Chattanooga otherwise had, or were there additional reasons?

A. I think there may have been one other asset there and that is, that once the task force had decided for—or there was an indication that probably they'd use Pennsalt [fol. 1634] know-how, although this had not been decided by February 11th, and inasmuch as Pennsalt was going to

operate it, there were added advantages in having the plant at Calvert.

Q. Had the decision to make Pennsalt the producer been firmed up between your January 21st meeting and the February 11th meeting, or was it firmed up only at the meeting on February 11?

A. I'd have to know whether they had had any sessions on the technical end between those two meetings and I don't recall that. I know that it certainly was decided finally at the February 11th meeting that Pennsalt would be the producer, or would handle the production.

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[fol. 1635] Q. Turning your attention back to Plaintiff's Drake Exhibit No. 19 which was introduced yesterday, being Pennsalt's Capital Investment Policy No. 1, I wonder whether you can tell us the date on which the Capital Investment Policy of Pennsalt changed from a figure of 30 [fol. 1636] per cent to one of 25 per cent?

A. I think it was somewhere in '50—oh, let's see, I think the first one was in '53 and the change was '58.

Q. The explanation on Exhibit 19 of Pennsalt's Capital Investment Policy poses three alternative situations in which the return on investment will be matched against certain characteristics of the project.

I wonder with reference to the Penn-Olin, or the sodium chlorate in the east project of Pennsalt, you can tell us which of these three alternatives was applicable to your company's evaluation.

A. It would be covered by the first two paragraphs under "Rate of Return". Do you wish me to repeat those?

Q. It's not necessary at all, sir.

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[fol. 1637] A. During the period '55-'59 did Pennsalt have the facility to erect and sell the output of a sodium chlorate plant of a capacity less than the 25,000 tons?

Q. That is my question, yes, sir.

A. The only answer to that could be "yes".

Q. In each of the cases which we have gone through, is it a fact that such projects were rejected by Pennsalt because

the return on investment did not meet the policy objectives of the company?

A. That's correct.

Q. Where the return on investment was less than policy objectives, less than 25 per cent, is it a fact that Pennsalt [fol. 1638] could have made some money on those projects?

A. That is a correct statement.

Q. And the rejection of projects during this period was based not on the inability to make money but on the inability to make sufficient money to justify the venture in terms of the company's investment policy?

A. Yes. At some point, however, you wouldn't make any money.

Q. Concerning ourselves——

A. There could be conditions in a smaller plant where you wouldn't make any money. There was no guarantee that you could make money on any one of those smaller plants.

Q. Well, where, for example, the return on investment was calculated to fall in the 10 to 15 per cent range, and where there was no doubt that Pennsalt did have the marketing ability to sell the output of a plant of that kind, would Pennsalt under such estimates be able to make some money on the project?

A. Yes, I would add there again that probably at some loss on some other project which would meet the capital investment standards that we have set.

Q. When you speak of loss you speak of loss of additional income?

A. Yes. In other words if we had put the money into this venture at a 10 to 15 per cent return, obviously that [fol. 1639] money was not available, would not be available, to put into a venture which would realize our standard.

Q. Would it be correct to say that the Penn-Olin venture represented the most profitable way in which Pennsalt found itself able to enter the sodium chlorate business of all the alternatives that it faced during the years 1955 through 1960?

A. Yes.

Q. And is it a fact that the joint venture enabled Pennsalt to participate in the construction and operation of a

larger plant with a greater sales potential than any of the plants it considered on its own?

A. With the exception of the combined—if it had materialized—the combined chlorate—perchlorate plant.

Q. And is it correct that the Penn-Olin venture enabled Pennsalt to enter the sodium chlorate business by acquiring a sales force or sales agency rather than building a sales force?

A. I don't think you could say that Pennsalt acquired a sales organization.

Q. If I might rephrase the question, acquired the services of an existing sales organization rather than build its own?

A. I would prefer to state that we are utilizing an asset [fol. 1640] which our partner has in this venture.

Q. And is it true that the joint venture with Olin enabled you to enter the sodium chlorate business in the east with less competitive risk than you would have encountered had you entered that market on your own?

Mr. DeLone: Would you explain what you mean by "competitive risk"? The term is a little obscure to me.

By Mr. Freed:

Q. In terms of Pennsalt's ability to meet competition in the sodium chlorate business, is the venture which it undertook with Olin a venture which is better able to compete in the sodium chlorate business than one which it might have undertaken using Pennsalt resources alone?

A. For the size of the plant required to get a return which would meet our standards and considering the time element—by that I mean that with a sales force in being, our partner can or should be able to sell chlorate better in the southeast now, better able than we would be. I would not, and I don't think I could, admit that in the event that we chose to establish a sales organization in the southeast, go through the time, training, the get-acquainted procedure to which I referred yesterday, that we couldn't be, in time, just as capable of selling chlorate in the southeast as anyone else.

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[fol. 1641] By Mr. Freed:

Q. I think that's all we can ask.

In an article of a different vein appearing in "Chemical Week" on March 25, 1961, there is a description of the advantages which a joint venture has over other methods of corporate growth. I would like to read to you several of these advantages to inquire which of them, if any, are advantages which accrued to Pennsalt or to Olin or to the market place from the formation of Penn-Olin.

The first is: "Joint venture can get a new product to market faster." That wouldn't be applicable here would it, sir?

A. No.

Q. The second is: "Research and production costs are likely to be lower."

A. I can't see research cost being any lower. If the joint venture enables the construction of a larger plant, naturally your production costs are going to be lower, assuming you can sell the output of the plant.

Q. The third is: "Increased borrowing power."

A. I suppose there are instances where that could be [fol. 1642] considered a factor. In our particular instance I don't think it has any bearing on it.

Q. Another advantage is: "The chance to diversify into product lines not handled by either parent company."

A. I can conceive that if you add the word "profitably" after the word "diversify" that could play a part in some instances.

Q. And another of the many factors mentioned here is "The opportunity to upgrade products." Is there a quality enhancement which may result from Penn-Olin?

A. You're talking now from the broad terms of joint ventures?

Q. No, sir, I mean only to direct your attention to Penn-Olin.

A. Oh, would you repeat the question then, please?

Q. The question is whether the opportunity to up-grade products is a possible advantage of the Penn-Olin venture?

A. No.

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[fol. 1643] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 392C

Philadelphia, Pennsylvania.

EXCERPTS FROM PRETRIAL ORAL EXAMINATION OF WILLIAM P. DRAKE, ON SEPTEMBER 28, 1961

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[fol. 1644] (Draft of press release dated February 5, 1958, was marked Plaintiff's Drake Exhibit 48 for identification.)

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[fol. 1645] By Mr. Freed:

Q. Mr. Drake, since the time of your deposition in August, Pennsalt has produced and furnished a copy to the Government of the minutes of the appropriations committee meeting No. 15 dated January 29, 1959. This document was marked yesterday as Plaintiff's LaLande Exhibit 11 for identification. At the time of your deposition in August, I believe you testified that you could not recall the details of your conversation with Mr. Logan in New York in January, 1959, and did not know whether any minutes of the appropriations committee meeting might have reflected information on that subject.

• • • • • • •

[fol. 1646] A. No, I am afraid it doesn't.

Q. Then, directing your attention solely to what went on at this committee meeting, can you recall what was said on January 29, 1959, regarding the exploration of a joint venture with Olin in the East on a chlorate-perchlorate plant?

A. I am not at all certain that we had talked with Olin about perchlorate prior to this. We may have; I don't recall it. It is conceivable that at this meeting we discussed —we had been discussing with them chlorate—it is conceivable at this meeting that we internally evaluated in our

own minds whether it would be desirable to talk with Olin not only about chlorate but chlorate and perchlorate.

Q. I believe you stated that prior to this time, your conversations with him had related only to chlorate. If you will recall, sir, Plaintiff's Drake Exhibit 27 referred to conversations between Mr. Logan and you and other Pennsalt people on the subject of chlorate and perchlorate in Febru-
[fol. 1467] ary, 1958.

A. Well, if that's documented, well, then—

Mr. De Lone: Let him see whatever exhibit you are referring to for a minute, please. You are talking about the February meeting with Logan.—

Mr. Freed: The February 4, 1958, memorandum of Mr. Logan.

Mr. De Lone: Let's let the witness see that, then.

The Witness: Wasn't that in reference to my mentioning that we were putting—we were going to make an announcement of a perchlorate plant in the Northwest? Since he wrote this probably right after the meeting, and I am recalling it from memory, I think probably this—I would put more weight on this than my recollection.

By Mr. Freed:

Q. And by "this," you are referring to Plaintiff's Drake Exhibit 27?

A. Well, I am talking about the question I just endeavored to answer about whether or not we had discussed perchlorate with Olin Mathieson prior to this April—January 29th meeting.

Q. And I only wish to make clear that the document which you examined, when you talked about his recollection, was the February 4, 1958, memorandum?

[fol. 1648] A. Yes.

Q. By Mr. Logan to the files, is that correct, sir?

A. Yes, and I—all I am saying is that since he wrote this right after our meeting, undoubtedly I would be more inclined to put more weight on this document than on my memory.

* * * * * * *

[fol. 1649] By Mr. Freed:

Q. My question, Mr. Drake, is whether the appropriations committee meeting minutes produced today in any way refreshes your recollection as to the course of events regarding the chlorate-perchlorate plant in the East which was discussed at your last deposition and which is referred to in Plaintiff's Drake Exhibit 32 which was the minutes of the meeting on November 3, 1958. I hand you a copy of that document so that you can refresh your recollection regarding the subject matter of the question that Mr. De Lone took exception to.

A. As is indicated in this Drake Exhibit 37, is it—oh, Plaintiff's Drake Exhibit 32—after said December—November 11, '58 meeting—sorry, November 3, '58 meeting; reported on November 11—I am sure I must have mentioned to the board the possibility of our putting in a plant at Calvert City.

Subsequent to that, we went ahead and expanded the plant at Portland. Our experience almost immediate and virtually running up to the present time with perchlorate at Portland has not been the best in the world and I am sure that with that experience starting when we first enlarged the plant, very little if any further thought was given for some time about a plant in the East. The Portland plant, the first unit was really a pilot plant, the expansion of that to 2,000 tons was, well, some would call it a commercial unit, some would call it a semicommercial unit, one of the [fol. 1650] purposes of which was to determine whether we could make a product of specifications which would meet the demands of various Government agencies or their authorized contractors and we have had difficulty with the—some of the applications, difficulties which I think are gradually being worked out.

We have also had the difficulty of disposing of the tonnage both for the specification reason as well as the demand reason. Other than that, I don't think I have anything I can add to what I have already said about this, the plans for the express plant in the South as referred to in that press release.

Q. Do you recall when it was that the ammonium perchlorate experience of Pennsalt led you to conclude that

you would not consider producing that product at least for the time being in the East?

A. Not specifically. I would imagine that it was not long after we started up the enlarged unit at Portland, though.

Q. I would like to show you, sir, a press release dated February 10, 1959, which the reporter can mark as Plaintiff's Drake Exhibit 49.

(Press release dated February 10, 1959, was marked Plaintiff's Drake Exhibit 49 for identification.)

[fol. 1651] By Mr. Freed:

Q. Can you tell us with reference to that press release approximately how long after the announcement of the expansion at Portland the decision was made respecting a chlorate-perchlorate plant in the East?

Mr. De Lone: "The decision was made"? Would you explain what you mean by "the decision"?

By Mr. Freed:

Q. Can you tell us when following the date of this press release the testimony which you have previously given concerning Pennsalt's cessation of interest, temporary or otherwise, in a perchlorate-chlorate plant in the East happened?

A. No, I can't.

Q. In terms of the year 1959, do you have any idea how close after or long after this press release the decision if any was made concerning an eastern perchlorate unit?

A. Well, first I would have to ascertain when this unit went on the line and get something to tie it to. Perhaps to save time that I can comment on it this way: It was undoubtedly some time after the facility went on stream that we determined that our specifications were not suitable for some of the applications. Obviously we couldn't have determined that before we went on the line because we weren't making in that amount.

Q. I wonder if you could tell us with reference to management committee meeting No. 102 held in June, 1959, [fol. 1652] whether the minutes at that meeting enable you in any way to fix a date? These minutes have previ-

ously been identified as Plaintiff's LaLande Exhibit 3 and the minute to which I am referring is on page 3-K.

A. This I think still refers to the Portland plant and, therefore, in June, no work had been started in building the plant because we are still talking about—I raised the question here, could the plant be located in California, to which Mr. Shanaman replied that the economics would be bad since power is 60 per cent of the cost and the power costs in Sacramento are 4½ to 5 mills compared with 2 mills at Portland, so I would gather from this that the plant had not been started. In fact, I think even the—it was just then coming to us in an appropriation request form; hence the question why the relatively lower return on investment.

Q. Then would it have been some time in the latter part of 1959?

A. I would guess the latter part of '59 or early '60 that that plant went on stream. A lot of water had gone under the dam or over the dam between the time we first talked about this and the time it went on stream and, as I testified, I believe, in Washington we became quite excited at various times about the projections for demand for ammonium perchlorate, demands which even today have not [fol. 1653] materialized anywhere near to the degree that they were projected back in '58 and '59 and it is conceivable that some of that came to light not long after our plant went on stream at Portland. There was the other factor which I think I also alluded to at least that as so often happens when you talk to people who are supplied with—from one source—about creating a second source, they welcome you with open arms. You come around with the second source and they are happy to know that if anything goes wrong, they have got a second source to go to, but they don't always follow through on awarding you any business. That's one of the risks that, of course, anyone has to take in going into a business like this.

. . . . . .

[fol. 1654] By Mr. Freed:

Q. And it would have been shortly after the date on which this plant did come into production that you encountered your second thoughts about ammonium perchlorate; is that what you said?

A. That's what I am trying to recall and, as best I can, I think that's a reasonable statement.

• • • • • • •

[fol. 1655] By Mr. Freed:

Q. Mr. Drake, can you tell us on the basis of those minutes why it was that the matters covered in the last paragraph of Plaintiff's LaLande Exhibit 11 were of interest to you at that time with particular reference to Olin.

A. Well, this is about the time that we were expanding [fol. 1656] our plant up at Portland, if my dates are correct, or were talking about expanding the plant at Portland, isn't it?

Q. That is correct.

A. Yes. So that at that time, our—we had some enthusiasm for perchlorate based on estimates that had been gleaned from one source or another.

Q. And my question is, why was the chlorate-perchlorate plant referred to in these minutes being considered in connection with Olin?

A. Well, No. 1, the chlorate phase of it was being considered with Olin because of our—as has been brought out in the testimony—prior discussions with them about the desirability of a chlorate plant in the South, we having determined that we could not justify a chlorate plant in terms of our return on investment criteria. I imagine that the perchlorate came into the picture because of the awareness both on the part of Olin and ourselves of this potential demand for perchlorate.

Q. Referring back again, sir, to Plaintiff's Drake Exhibit 32 and drawing particular attention to the reference in paragraph 7 on page 2 as follows:

> "A second follow-up announcement on this proposed Calvert City plant should be issued promptly to preempt the market from other interested companies—Solvay, Columbia-Southern, Olin Mathieson."

[fol. 1657] And in light of the further statement on page 4 under subparagraph "B," as follows:

> "Industrial division immediately to plan, organize and undertake entry in the Southern and other Eastern pulp and paper markets. The objective will be the commercial sale of product beginning in January, 1960."

I wonder whether you can tell us the circumstances if any which led to a consideration in January of 1959, two months later, to proceeding with the chlorate-perchlorate venture at Calvert City which is the subject matter of this memorandum as shown by its title under "A" on page 1 as a joint venture with Olin, and I hand you in connection with my question the entire document, Plaintiff's Drake Exhibit 32, so that if in any way I have misstated——

A. No, I recall we spent quite a bit of time on this down in Washington. Can I look at this again?

Q. Oh, anything at any time.

A. I can't reconstruct from memory what happened between November 3rd and January 23rd. I think we have had in the testimony some references to discussions between Olin and ourselves, between those two dates, which shed some light on it.

The other factor which is purely conjecture on my part and should be so recorded is that it is conceivable that at [fol. 1658] the—that whereas we may have been giving some thought among some of us about the possibility of including perchlorate in a possible joint chlorate operation with Olin Mathieson, it is quite likely that we had not brought that into the picture with the group which was represented here, the entire group which was represented here at this meeting of November 3 which included, as you will note, not only the—some of the officers of the company but also some further down the line. That's purely conjecture on my part but I am—it is a possibility.

Q. I don't understand your last answer, Mr. Drake, in light of the subject matter of the November 11, 1958, document which refers to a combined chlorate-perchlorate venture at Calvert City.

A. Yes.

Mr. De Lone: The witness has two documents before him, as I understand him, both of which are involved in your question.

The Witness: Well, I think I can answer Mr. Freed.

What I have endeavored to indicate here is that this November 3, 1958, meeting dealt with a combined chlorate-perchlorate venture at Calvert City. You will note that it was—included in that meeting were members from the [fol. 1659] market research group and others who were not, I would say, in the higher echelons of the company and it is very possible that at that stage of the game we did not bring into the—this discussion any possibility of doing this other than on our own because of the people at the meeting.

Q. But apart from the conversations which took place between you and Mr. Logan or someone from Pennsalt and someone from Olin in between the November 3, 1958, meeting and the January 23, 1959, appropriations committee meeting, can you recall any other discussions or any other events that intervened between those two dates that were relevent to this matter?

A. No, no; I can't.

Mr. Freed: I would like simply for the purpose of clarifying the record to offer as Plaintiff's Drake Exhibits 50 and 51 a press release by Pennsalt numbered PS-1454 which contains a handwritten notation on the photostat, "10-5-58." That will be Exhibit 50, and the release labeled PS-1391 which appears to be the February, 1959, undated press release and that document is to be marked Plaintiff's Drake Exhibit 51, and after the reporter marks them, I would simply like to have Mr. Drake identify them for us so that the references which have been made to press releases here will have specific references in the record.

[fol. 1660] (Press release PS-1454 was marked Plaintiff's Drake Exhibit 50 for identification.)

(Press release PS-1391 was marked Plaintiff's Drake Exhibit 51 for identification.)

Mr. De Lone: I understand you have no questions to ask the witness about these. There is no dispute these are copies of Pennsalt's press releases.

* * * * * * *

[fol. 1661] The Witness: Exhibit 51 refers to the initial unit for the production of ammonium perchlorate at Portland. Exhibit 50 refers to the same initial unit and merely states that it is on stream. This has a penciled dating on it, "10-5-58."

Exhibit 49 announced approval of plans for the expansion of that initial unit.

(Discussion off the record.)

By Mr. Freed:

Q. Mr. Drake, the last sentence in the appropriation committee meeting minute of January 29, 1959, which is Plaintiff's LaLande Exhibit 11, states:

> "If Olin is not desirous of proceeding further with this joint venture, Dr. LaLande agreed to resubmit to the committee data on Pennsalt doing the project alone."

Can you recall any of the conversation at the meeting which was held on January 23, 1959, and as recorded in this document concerning that request to Dr. LaLande or Dr. LaLande's agreement with respect to it?

[fol. 1662] A. No, I can't.

Q. Mr. Drake, at page 242 of the transcript of your deposition in Washington, you were asked about the contact or the making of contact between Pennsalt and Olin at the end of 1959 or in the beginning of 1960 preliminary to the formation of Penn-Olin and I show you your deposition. I show you the transcript to refresh your recollection on that matter.

Subsequent to your deposition, Mr. Land was examined in Tacoma on August 10, 1961, and at page 33 of the transcript, he furnished his recolection of the manner in which the contact between Olin and Pennsalt just prior to the Penn-Olin negotiations took place.

I wonder if you can tell us whether you have read Mr. Land's testimony on this period of time prior to your appearance here today for the purpose of asking you thereafter whether it in any way refreshes your recollection on

the events which led up to the commencement of negotiations between Pennsalt and Olin in 1960.

• • • • • • •

[fol. 1663] A. First, let me say Hugh Land not only looks like an elephant but he has got a memory like one, by comparison, at least.

(Discussion off the record.)

A. I say that as a compliment, actually, because he is a very fine person.

I still don't recall; but this is certainly very conceivable that I would have received a call from Mr. Block. This, of [fol. 1664] course—I think I mentioned this earlier in another connection—that he was quite a figure in the Olin Mathieson group. I think probably what this did was finally get up to a point where I said, "Well, let's see if there is anything to this." Whether he actually talked with me or not, I honestly can't remember. If it was a talk, it certainly was by phone because the only time I ever met with Mr. Block was down at—was over at the meeting, I think, in January of '60, and subsequent to that, but this very well could have been the mechanism by which this thing got on the track, so to speak.

Q. But you have no specific recollection yourself of the conversation?

A. I honestly don't. I don't, no.

Q. From Mr. Land's reference here, can you in any way recall any contact between you and anyone from Olin between the date of the last event about which you have testified in 1959 which I believe was a letter from you to Mr. Logan or vice versa in April, 1959, and prior to the date of his conversation at the end of 1959? I believe in the last examination you had no recollection. You did state that you would consult your records or your diary.

A. Which I did, incidentally, and tried to——

Q. And see whether you could reconstruct anything in that nine-month period?

[fol. 1665] A. I looked for it and I honestly can't recall.

Again, I would say it is not unlikely that I saw John Logan in that period but I don't recall it.

. . . . . .

By Mr. Freed:

Q. In the questions I am about to direct to you, Mr. Drake, reference will be made frequently to Plaintiff's LaLande Exhibit 3 which is a many-paged document con-
[fol. 1666] taining extracts of management and other committee meetings of Pennsalt and I will refer to the particular meetings by the number and date of the meeting rather than the number and date of the document which I don't have before me.

. . . . . .

[fol. 1667] By Mr. Freed:

Q. In the minutes of the management committee meeting No. 88 on September 11, 1958, there is a reference to a sodium chlorate plant, the question being a request by you for firm decisions to be made on "Whether we will build a sodium chlorate plant and, if so, where." I wonder whether you can recall the circumstances which caused you to ask this question in September, 1958.

A. Let me see the whole minute, will you, for that meeting?

Q. I would like you to refer to the full minutes at any time.

A. I think in this instance, it is important to put it in the context of the meeting because this is referring to the upcoming planning meetings where various items are listed for consideration, one of which was this old chestnut of again trying to determine once and for all whether we want to get into the sodium chlorate business or not and, if so, where.

Q. Can you recall any specific event or circumstance which prompted the renewal or awakening of your interest in sodium chlorate at the time of this meeting?

[fol. 1668] A. No, this, I would surmise this only, that in the making up of our capital budget for the next year, somebody raised the question, "Well, now, what about this old

horse, sodium chlorate; should it be included or shouldn't it?" And, undoubtedly I said, "Well, let's get it on the agenda and take a look at it," and that's the most—and purely conjecture.

(Discussion off the record.)

By Mr. Freed:

Q. Then, as I understand your testimony, this only opened up the matter for consideration or reconsideration. It did not, to the best of your recollection, follow any specific transaction or communication outside the company?

A. Not to my knowledge, not to my recollection.

. . . . . .

[fol. 1669] Q. Can you recall at the time of either of these meetings, No. 88 and No. 89, any discussion about ammonium perchlorate in conjunction with the sodium chlorate referred to?

A. No, sir, in conjunction with that plant. We discussed ammonium perchlorate for the Northwest at the same meeting.

Q. But do these minutes indicate to you that at this particular time a sodium chlorate plant in the South by itself was being considered?

A. I would assume so, from these minutes.

Q. In management committee meeting minute No. 90, dated November 13, 1958, a reference is made under Item 3 to a Southern chlorate plant: In light of the testimony which you have previously given both today and in Washington about the meetings in October and November on the subject of a Southern plant, can you tell us whether this minute in any way adds to your recollection of the consideration being given to that Southern plant at this time, November, 1958?

A. The only thing I think I can—it brings to mind is—that someone must have asked whether or not perchlorate should be considered as a part of this Southern plant. Apparently not much consideration was given to it other than to—for me to ask the treasurer to determine whether perchlorate would be subject to renegotiation.

[fol. 1670] Q. And do you recall what the answer to that question was?

A. I think it was that it would be subject to renegotiation.

Q. Can you tell us what bearing the subject of renegotiation had on Pennsalt's consideration of entry into this business?

A. Oh, absolutely. If you are making and selling a product which is subject to renegotiation, the risk involved is far greater for the producer by virtue of the fact that whereas you may have gone into it only on the basis of a reasonable return on investment, reasonable in terms of our own criteria, when you get to the point of renegotiation, you may find out that the profits just aren't there, so it is a very significant point.]

. . . . . .

[fol. 1671] Q. Can you tell us, sir, whether the renegotiation problem with ammonium perchlorate has ever caused you to take or not take action that otherwise would have been performed at Pennsalt?

A. No, I think it has merely raised a danger signal to us.

. . . . . .

[fol. 1672] Q. Directing your attention next, sir, to the minutes of management committee meeting No. 99 held on April 9, 1959, VI talks of a Southern chlorate-perchlorate plant and states as follows:

> "Mr. Drake advised that the joint venture potential location of Brunswick was now out of consideration but that MacIntosh, Alabama, was a possibility on which Mathieson will report further to him shortly."

Can you recall the information which you communicated to this management committee meeting in April 1959?

[fol. 1673] A. I think I perhaps covered that partially at least in earlier testimony but my recollection is that we soon found out that the power costs at Brunswick were exhorbitant in terms of the needs for a plant. I recall that Brunswick, Georgia, was a plant location of Mathieson. They also had a plant at MacIntosh. Undoubtedly the re-

port that Brunswick was not a suitable site because of the power costs was followed by a comment, "Well, we will take a look at MacIntosh and see if that looks any different." Now, I would imagine that that's virtually what I reported at that meeting.

Q. Can you recall the nature of the communications between you and Olin prior to this meeting that led to your report?

Mr. De Lone: Now, Mr. Freed, didn't we have a number of documents identified at the last deposition on this very subject? It was at one of the depositions, I think, of Mr. Drake, correspondence?

Mr. Freed: We did, Mr. De Lone, have an exchange of correspondence between Mr. Logan and Mr. Drake.

Mr. De Lone: Yes.

Mr. Freed: My question is designed to determine whether the minutes of this meeting in April, 1959, recall to Mr. Drake any other communications apart from those two letters.

The Witness: Have you got the letters right there?

[fol. 1674] By Mr. Freed:

Q. I believe I have.

A. Well, to save you time, I don't recall any other communications. There could have been a phone conversation or the like but the reason I say that I think there might have been a phone conversation, because I remember trying to needle John Logan from time to time to let us know what he had found out about Brunswick.

. . . . . .

[fol. 1675] By Mr. Freed:

Q. I don't believe that either of the two documents which you are now holding, sir, make any reference either to a joint venture as such or to a perchlorate plant and I believe that earlier this morning you testified that you had no specific recollection of having talked to Mr. Logan prior to that appropriations committee meeting in January on the subject of perchlorates and I wonder whether all of the documents and letters and discussions and in particular

the minutes of meeting No. 99 and your recollection of needling of Mr. Logan on power costs enable you to add anything to the discussions which you can recall having taken place between you and Mr. Logan in the early part of 1959.

A. I am afraid I can't.

Q. Can you recall following this meeting on April 9, 1959, in the minutes of management meeting 99 what the next contact between you and Mr. Logan on this subject matter was?

A. I don't recall what the next contact was.

Q. Do you recall whether you did receive a report on MacIntosh?

Mr. De Lone: There is a letter on that which I believe has already been marked by the Government in previous depositions.

Mr. Freed: To which letter are you referring, sir?

[fol. 1676] Mr. De Lone: A letter dated April 7, 1959.

Mr. Freed: I believe you will see that that letter is dated two days before this meeting and that letter refers to exploration at MacIntosh and my question is whether Mathieson reported to Mr. Drake on the results of its examination of the MacIntosh location.

Mr. De Lone: I beg your pardon.

A. They must have. Darned if I know when or how unless, like several other things, it just died a natural death.

By Mr. Freed:

Q. I would like next to direct your attention, Mr. Drake, to the minutes of the management committee meeting No. 100 which took place on May 8, 1959, but is not contained in the extract in the LaLande Exhibit before you. The particular item to which I direct your attention does not refer to any specific acquisitions or joint ventures and does not mention any particular chemicals but I wonder whether you can recall whether any of the nine projects referred to included the consideration then being given to a joint venture with Olin and perhaps to clarify the record at this point I would read into the record that this item in the minutes of meeting No. 100 reads:

"VI. Acquisitions and joint ventures.

[fol. 1677] "Item 1. Mr. Drake brought up to date our progress in this area (i.e., nine projects and/or companies)."

A. I don't know what is specifically——

Mr. De Lone: I take it the Government doesn't expect to argue any proclivity toward joint ventures from this one reference that has been read into the record.

Mr. Freed: It does not.

A. I don't recall whether or not it was raised as a matter of Olin Mathieson. In other words, I don't know whether that name was brought up here.

By Mr. Freed:

Q. In light, sir, of the reference to the joint venture in the minutes of the previous meeting No. 99, the extract of which was discussed just a few minutes ago, can you recall whether consideration of a joint venture with Olin was dropped between the dates of those two meetings, namely, between April 9 and May 8, 1959?

A. Oh, I wouldn't think so.

Q. Can you recall any change in the status of your consideration of it between those two dates?

A. No.

(Discussion off the record.)

[fol. 1678] By Mr. Freed:

Q. Dr. Drake, I would like to refer you to the extract of management committee meeting No. 103 dated June 25, 1959, on the subject of ammonium perchlorate and also of chlorate-perchlorate completion and ask whether you can explain with reference to these items anything about the status of consideration then being given by Pennsalt towards an ammonium perchlorate or sodium chlorate plant in the East?

A. I am not at all certain what it refers to, whether it refers to East or West. You are speaking now of VI, Item "G"?

Q. VII.

A. VII? I beg your pardon.

Q. Could you address your attention to the full minutes of that meeting to determine from the subheadings whether any enlightenment is given to this extract?

A. Oh, I get it. This was in June of 1959 and weren't we at that time then building the plant at Portland, that is, the expansion? And since this was referring to 1960, the 1960 program, it was assumed that it would be completed during 1959 and, therefore, capital would not be required in 1960 for it.

Mr. De Lone: The "It" and "This" is all with reference to the West Coast expansion of the chlorate-perchlorate?

The Witness: Yes.

[fol. 1679] By Mr. Freed:

Q. With reference to the ammonium perchlorate statement that you made as reflected in these minutes, can you tell us what the outlook in June, 1959, was on the subject of ammonium perchlorate?

A. You are referring to the article in "Missiles and Rockets"?

Q. I am referring to your reference to the article in "Missiles and Rockets."

A. To the article in "Missiles and Rockets"? Well, it sounded awfully good but I remind you of what I said several times before that what we heard from the various agencies and what we read in magazines like "Missiles and Rockets," whereas, at first, it got us quite excited, we got much more mature in our appraisal of what we heard and read and got less excited as we went along because, obviously, it didn't materialize.

Q. At least, at the time of this particular meeting, the reports were favorable enough to enable you to continue with the Western expansion; is that correct?

A. Well, I think since we were then building the Western expansion, why, we rationalized that this was comforting.

. . . . . .

[fol. 1680] Q. With reference to the contribution of Olin to the joint venture, the statement is made that Olin has "A patented chlorine dioxide process for pulp bleaching which uses sodium chlorate." Can you recall at any time discussing the importance or significance of the patented aspect of Olin's process?

A. If I understand your question correctly—possibly I can restate it in order that I may understand it correctly—are you refering to the sigificance of the patent, of the patented—patentability of their process in terms of its being a selling tool; is that what you are driving at?

Q. I am referring, sir, to the significance if any to the fact that Olin's process was patented.

A. Well, I am sure that must have at some stage of the game been considered because we felt it was sufficiently valuable to get a license to use it up in the Northwest primarily because that's where we were selling the material, chlorate.

Q. You are referring to that license agreement of 1953; is [fol. 1681] that correct?

A. Yes.

Q. But do you know, sir, whether the patent feature of the chlorine dioxide process gives any advantage to Olin or to Penn-Olin today?

A. Well, I think it has been brought out both by myself and I am sure it must have been brought out by others that the value of that so-called patented process today is —has been minimized over the years so that today the fact that they have a patented process, may be it is a plus factor, but it certainly is not in our estimation as significant as it was, say, in '52 or '3, whenever it was we originally got a license on it.

Q. Do you know whether Penn-Olin has asserted or intends to assert any rights by virtue of the patented feature which you discussed here?

Mr. De Lone: Well, now, I do think that has gone far beyond anything that has to do with these minutes.

Mr. Freed: I don't believe so at all, Mr. De Lone. This is one of the few references if any to the patented feature of the process. It is mentioned as an answer to be given in response to questions directed to the joint venture and

it suggests that some importance was attributed at least at the time of this meeting to the patented feature of the process and the inquiry is designed to determine what if [fol. 1682] any value or importance the patented aspect has.

A. I think you are reading into that too much significance to the word "patented." I think it is a description of what it was rather than by virtue of the fact they have a patented process. This is a wonderful thing for this joint venture. I think we had already recognized at that time that the fact that it was patented was not as important as it had been previously.

By Mr. Freed:

Q. Is it your understanding, sir, that the process is freely available to both consumers and to producers who wish to sell sodium chlorate to those consumers?

A. I can't answer that unequivocally but I do know that it has been used widely enough so that I have questioned in my own mind why we continue to pay Olin a royalty on the chlorate that we sell under this agreement, so I think that answers your question that we certainly question the value of that process as a patented process.

Q. And, as far as you know, does the patented feature of the process inhibit anyone other than Olin or Pennsalt, its licensee, from selling sodium chlorate to someone who uses or wishes to use the chlorine dioxide process?

A. I don't believe anybody that buys sodium chlorate today is at all concerned about whether they have a license or they don't under this patent.

. . . . . .

[fol. 1683] Q. In the minutes of full management council meeting No. 6, and that minute is dated March 31, 1960, the statement is contained:

"Penn-Olin: The sales question was briefly discussed."

Can you recall what the point of reference in that discussion was?

A. I would have to look and see who was at the meeting. My guess would be, however—and I think it would probably be a darned good guess—that the fellows in the Ag Chem, for example, said, "Now, are we going to have chlorate to sell from this facility?"

Q. I believe that Plaintiff's LaLande Exhibit 5 introduced yesterday contains the list of people who were present and absent at various meetings covered by these extracts and the meeting to which we are now referring was attended by Messrs. Clark, Clem, Collins, Drake, LaLande, Logue, McWhirter and Willits and also Mr. Tuttle.

[fol. 1684] A. I think my comment would still hold even though actually neither Land nor Watson nor Shanaman were there. I am sure that the question had been raised as to who was going to sell the output of this joint venture, a question which, incidentally, as far as I know hasn't yet been resolved completely.

Q. Can you recall whether other than the testimony you have already given there were any uses of sodium chlorate other than for agricultural chemical purposes that Pennsalt personnel wanted to sell the output of Penn-Olin for?

A. Oh, undoubtedly our Eastern sales organization made some noise about being able to sell some of the output of this for other than agricultural chemicals use. That would particularly pertain to a modification and, remember, at this stage of the game, we were not confined solely to chlorate in our thinking. Our modification of sodium chlorate would be potassium chlorate which is used in the match industry, so that could be another outlet which could have been discussed at this time.

This is always conjecture on my part but I am trying to give you what I can imagine took place as resulting from—as boiled down—to this terse statement under, "The sales question was briefly discussed."

. . . . . .

[fol. 1685] Q. Directing your attention to the minutes of full management council meeting No. 7 in which Paragraph 2 of the abstract states:

"The council was advised that Mr. More believes that 1500 to 2000 tons of chlorate production on the West

Coast will be uncommitted for 1961 sales and, therefore, will be available to Olin."

Can you recall any reasons being given for the availability of sodium chlorate in April, 1960, for sale in the East?

• • • • • • •

[fol. 1686] (Complete extract of page 2 of full management council meeting No. 18, dated June 13 to 16, 1961, was marked Plaintiff's Drake Exhibit 52 for identification.)

• • • • • • •

[fol. 1687] By Mr. De Lone:

Q. Mr. Drake, when you testified, prior to your testimony in Washington a couple days in August, I think August 2nd and 3rd—

Mr. Freed: 1st and 2nd.

By Mr. De Lone:

Q. —did you in preparation for those, for that testimony, review with me a large number of documents concerning the expected subject matter of your testimony, a substantial number of documents, material?

A. Well, you gave me certainly an outline of what questions would be——

Q. And beyond that, did we go over a number of documents in order to try to refresh your recollection about [fol. 1688] these matters?

A. Well, it is a matter of wording, but I would say "Yes."

Q. Now, did you repeat the same process and go over the same material again before your depositions here today or was your preparation for these depositions limited to a review of the minutes of the committee meetings that have been referred to and to the press releases concerning ammonium perchlorate?

A. Limited.

Mr. De Lone: Thank you. That is all.

[fol. 1689] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 393

Tacoma, Washington.

EXCERPTS FROM DEPOSITION OF F. C. SHANAMAN TAKEN ON AUGUST 8, 1961

* * * * * * *

[fol. 1690] FRED C. SHANAMAN called as a witness by and on behalf of the Plaintiff, being first duly sworn, was examined, and testified as follows:

Direct examination.

By Mr. Freed:

Q. Give the reporter your name and address.

A. Fred C. Shanaman, 26 Country Club Drive, Tacoma.

Q. And are you presently employed by Pennsalt Chemicals Corporation?

A. In the capacity of consultant.

Q. What was your last previous job with Pennsalt?

A. I was vice-president of the corporation.

[fol. 1691] Q. And in the capacity of vice-president, what were your responsibilities?

A. Specifically the management of the Tacoma and the Portland plants, and also the management of the agricultural chemicals activities of the company on a national plane.

Q. And how long did your vice-presidency with those responsibilities cover?

A. From about—I became the vice president of the Western corporation, which was a subsidiary of the parent company in Philadelphia, approximately in 1940, and subsequently the president of the subsidiary; in the forties I also was made vice-president of the parent corporation. I am sorry I can't give you the exact date.

Q. Prior to the time that you came with Pennsalt, was it engaged in the sodium chlorate business?

A. Was I—was Pennsalt—no.

Q. Could you give us briefly a sketch of how and when Pennsalt got into the sodium chlorate business?

A. Yes, in the thirties——

Mr. DeLone: Off the record.

(Discussion off the record.)

The Witness: What was your question?

Mr. DeLone: I am sorry.

[fol. 1692] (Whereupon, the last question was read by the reporter.)

The Witness: During the thirties, a Pennsalt subsidiary, Tacoma Electro-Chemical Company, operated a plant in Tacoma which did not have enough business to keep it as fully occupied as we would like, and consequently, I had a considerable amount of free time, which I spent looking for other opportunities for the corporation, other than merely the manufacture and sale of chlorine and caustic soda.

About the mid-thirties, the parent company began selling to the agricultural trade a product which we had from Natrona, Pennsylvania, where we operated a Cryolite process. The sale of Cryolite in the micronized form put me in touch with the agricultural activities throughout the Eleven Western States—that activity brought to light the fact that sodium chlorate was used in considerable quantity for herbicidal purposes and by the weed districts of the area, and also industrially by the railroads, principally for the eradication of weeds on the rights-of-way, an investigation, followed my market appraisal, and Mr. Gibbs evaluated our technical opportunities with respect to the type of facility [fol. 1693] which we might be able to put in. This resulted in the decision that if we could sell the quantity of sodium chlorate which I had indicated was seemingly available to us, then the company felt that it could produce sodium chlorates, particularly at Portland, Oregon, where the Bonneville Dam was being contemplated. This dam would provide power at rates which were being mentioned by those who felt they would have something to do with the operation of that facility in the order of a mill and a half up to approximately two mills per kilowatt hour. The cost of power is a very, very important factor in the manufacture of sodium chlorate.

So there were the combinations of the market possibilities, which I had uncovered, plus the fact that cheap power might be available, which seemed to provide a combination which was required for us to consider the installation of a sodium chlorate and potassium chlorate operation for the Pacific Northwest.

Does that answer your question?

Q. An excellent answer. Thank you, sir.

Do I correctly understand then, that the sodium chlorate and potassium chlorate operations were installed simultaneously?

[fol. 1694] A. Correct.

Q. Did Pennsalt develop its own sodium chlorate technological process at that time?

A. The market investigation indicated that as the European war clouds became more ominous, we would have to proceed perhaps more rapidly than originally contemplated, and since most of the technology related to the manufacture of sodium and potassium chlorate rested in the hands of the Europeans, it took plenty of time to develop our own process. Ultimately we did give consideration to making use of the chlorate cell, which was in use in France and in Germany.

However, the war between those two countries, at least, the looking at one another across the Maginot Line, indicated to us that we would possibly have to develop our own technology, and we did just that, and we put in our own cell, and began—we began constructing a plant in 1940.

Q. At that time were there any other domestic producers of sodium chlorate in the United States?

A. The Oldbury Chemical Company at Niagara Falls.

Q. You mentioned the cost of power as a mill and a half or two mills at that time. What is the cost of power today?

[fol. 1695] A. Two mills.

Q. So that then the power costs out here are approximately half of what they are in the TVA area, is that right?

A. Yes.

Q. At the time your sodium chlorate operations began, how far did the territory of your chlorine and caustic soda sales extend?

A. Chlorine and caustic soda?

Q. Yes.

Mr. DeLone: Do you mean in the Western operation?

Mr. Freed: Yes, sir.

A. Chlorine and caustic soda in bulk, the chlorine,—I will start with that.

Chlorine in bulk in tank cars could economically move to the pulp mills in the Pacific Northwest exclusive of the then existing plant bleaching pulp with our chlorine at Port Alice, British Columbia.

We supplied that plant with one-ton containers of chlorine, that is, chlorine packed in containers holding one ton each.

The other mills which existed from south to north, Salem, Oregon, and up to Everett, Washington, and over on the Peninsula as far north as Port Angeles, Washington, and east as far as Spokane, that would be the territory where [fol. 1696] chlorine would be moved.

Excuse me, Francis, did you want something?

Mr. DeLone: You said on the Peninsula. What is the Peninsula?

The Witness: The Olympic Peninsula.

Mr. DeLone: You have to excuse us. We are not used to that terminology.

A. (Continuing) Caustic soda, by reason of the fact that it is manufactured and sold in several grades, provides a different set of marketing problems. The bulk liquid grade in tank cars was sold in the same market area which I have identified for liquid chlorine in bulk.

In packages, the solid and the flake grades were marketed in the Eleven Western States and into export wherever we could find a market for any quantity from a carload down to LCL (or less than carload lots).

For chlorine other than in bulk and packed in cylinders and one-ton containers and with the exception of the accounts which used varying quantities of chlorine in the pulp industry, most of the demand for this type of chlorine was by water and sewage plants, small miscellaneous industrial demands, and the trade area where we could economically market that form of chlorine or that grade of chlorine. That type of package was used primarily for sales in the States [fol. 1697] of Washington, Oregon, Montana, Idaho, and the southern portion of British Columbia in Canada.

Q. With respect to the sales of agricultural chemicals in the early nineteen-forties, where did the Pennsalt Washington Division sell those products?

A. In the—on a national plane.

Q. And in terms of the salesmen involved, did salesmen from Tacoma and Portland travel throughout the United States?

A. No, we had offices elsewhere. We had offices in—we had a man or two working under my direction in the Philadelphia office. We had salesmen who were working out of their own homes, and we had—in due course we had a small manufacturing operation in Bryan, Texas, which means, therefore, that sales office location has been a changing picture, depending upon the demand for the type of product that we have had from one time to another.

It has changed considerably in the years since we first got into the agricultural chemical picture, and as the demand in the market place changed, and we no longer had enough business to justify maintaining an office in one location, it would be closed. We might open another in some other location, because some years you may be very strong with re- [fol. 1698] spect to the sale of your chemicals in the cotton areas, but if they changed to a type of organic in which you were not basic, there would no longer be any necessity for you to have the office in the particular area, so it would be closed.

Q. Does the Agricultural Chemicals Division today still sell its products nation wide for Pennsalt?

A. Yes, and as a separate group, a separate and distinct group from industrial chemicals, and the headquarters is still in Tacoma.

Q. Apart from chlorine, caustic soda, and the agricultural chemicals that we have just been discussing, at any time during your tenure with Pennsalt, have any other products been sold from the Western subsidiary or the Western Division of the Company east of the Rocky Mountains?

A. Other than agricultural chemicals, no, except whenever our plant had an incremental increase in the facilities, which were existent for the production of chlorine, caustic soda, ammonia, chlorates, to—we weighed the economics involved with respect to having the excess capacity stand idle or weighed against the freight equalization we might

have in order to reach a more distant market with the expectation that when and as the local or the immediate market [fol. 1699] grew to the point where it would require the services which we could render from a local plant, we would then discontinue shipping into other markets, because just common economic sense dictated that.

Q. Could you tell us how large the sales organization of the Agricultural Chemicals Division was?

A. It has varied. I think the maximum that I recall we ever had was in the early nineteen-thirties, and that was somewhere between thirty and thirty-five. I think that has varied from, on an average, I will say, it has averaged out somewhere in the neighborhood of twenty-five to twenty-six men.

Q. And about how many of that sales force today concentrates its activities east of the Rockies?

A. I can only tell you approximately what that division was prior to the early part of 1960 when I retired from the company.

Normally we considered that we would have, approximately twenty-five per cent of the agricultural sales force—on the West Coast, about twenty-five to thirty per cent would be a fair division for the Eleven Western States as compared with the rest of the United States.

That was dictated pretty much by the type of chemicals that we produced and the type of agriculture we were [fol. 1700] attempting to serve.

Q. Since your retirement in 1960, have you had any operating responsibilities?

A. None whatsoever.

Q. Have you consulted with the company on any?

A. When they asked me for advice, or requested my assistance, yes.

Q. Have you given any advice or assistance in the sodium chlorate area since 1960?

A. No. They have asked none, and I have volunteered none.

Q. In the sales by the Agricultural Chemicals Division east of the Eleven Western States, is it a—is it an accurate demarcation to define the Eastern sales territory as east of the Rocky Mountains for the purposes of——

A. (Interposing) Yes, east of the Eleven Western States

is, I think, a rather accurate statement concerning the division of the territory.

Q. And the Rockies would be the line of demarcation?

A. Right.

Mr. DeLone: Could we find out for clarity what Mr. Shanaman means by the Eleven Western States?

The Witness: Washington, Oregon, Montana, Idaho, Wyoming, Nevada, Utah, Colorado, New Mexico, Arizona, [fol. 1701] California, and I think that covers it.

I think I mentioned them all. I mentioned Washington, Idaho, Montana, Wyoming, California, Nevada, Utah, Colorado, Mexico, Arizona.

By Mr. Freed:

Q. Do you mean New Mexico?

A. Yes, New Mexico.

Q. Does the Agricultural Chemicals Division, at least up to the time when you retired, sell any non-agricultural product in the eastern part of the United States?

A. No, not to my knowledge. If they ever did, I wouldn't know anything about it. Certainly they never disclosed it to me, because we were operating the agricultural activities as a separate and distinct thing from the industrial group, and it would just simply be a confusing state of affairs to have them handle both.

I notice some companies do that, but we never did.

Q. As of the time of your retirement, approximately what was the dollar volume of agricultural chemical sales that involved sodium chlorate that consisted of products made out of sodium chlorate?

A. Products made from sodium chlorate?

Q. Yes.

[fol. 1702] A. We only had one, and that was Defolate, and that was approximately $100,000.

Q. And does the product Defolate cover both the herbicidal use and the railroad killing use that you have mentioned?

A. No, the Defolate is a defoliation chemical used in the defoliation of cotton principally in Arizona and New Mexico and a portion of California.

Q. Did the weed-killing sales—did the weed-killing func-

tions of the sales, which you made to the railroad—strike that. Strike the whole question.

I wonder if you could tell us what product was sold to the railroads for weed-killing purposes?

A. The weed killing by railroads, as far as Pennsalt's interests were concerned, involved sodium chlorate exclusively. That is the only product that we produced which had any significance as far as railroad weed treatment is concerned.

Q. Approximately what was the dollar volume of those sales?

A. It varied from approximately $320,000 to $500,000 a year. That is approximately, as close as I can recall.

Q. Is it your testimony that Defolate sales were principally in the Western States?

[fol. 1703] A. Correct.

Q. And how about the railroad weed-killing sales?

A. Most of it was in the Eleven Western States.

Q. Another application of sodium chlorate that you mentioned was potassium chlorate?

A. Yes.

Q. What was the approximate dollar volume of those sales at the time of your retirement?

A. From $75,000 to $125,000 a year.

Q. And geographically where were those sales made?

A. Mostly—on a national plane wherever the match industry existed; we made an effort to obtain business from them from the existing plants. I think the farthest east we have ever gone, and it took a lot of freight equalization to do it, but I believe we did sell sodium chlorate as far east as Ohio.

Mr. DeLone: Sodium or potassium?

The Witness: Correct that; that is potassium. They don't use sodium in the match industry.

By Mr. Freed:

Q. At the time of your retirement, were there any other applications of sodium chlorate or any of its derivatives which resulted in sales of any significance east of the Rockies, excluding the pulp and paper industry for the moment?

A. To my knowledge, no.

[fol. 1704] Q. Mr. Shanaman, several months ago the Government asked the Pennsalt, and Pennsalt furnished to us a list of all the sodium chlorates customers to whom sodium chlorate was shipped on and after the first of January, 1957.

We have up to this point attempted not to place the names of any of these customers in the record, other than those pulp and paper company customers who are relatively few, and whose names have previously appeared.

However, I would like at this time to show you the lists which were furnished to us.

These lists are two-fold: the first is called Exhibit 26-1, and it has been previously marked as Plaintiff's Johns Exhibit 10, and it contains a list of Pennsalt customers.

There is also an Exhibit 26-2, which has not previously been offered, and which the reporter could mark as Plaintiff's F. C. Shanaman Exhibit 1, which gives the name and address of each distributor, and the customer of those distributors to whom Pennsalt shipped sodium chlorate on and after January 1, 1957.

I wonder, sir, if, going through these documents one at a time, you could simply state for us as to each page of, first, [fol. 1705] Exhibit 26-1, the use to which the customers on these pages place sodium chlorate.

Mr. DeLone: Off the record.

(Discussion off the record.)

Mr. Freed: On the record.

By agreement of counsel it has been determined that during a recess today Mr. Shanaman will attempt to mark Exhibits 21-1 and——

Mr. DeLone: 26-1.

Mr. Freed: 26-1, and 26-2, in the terms of the use to which customers put sodium chlorate, and any questioning concerning uses or customers will be deferred until Mr. Shanaman has had that opportunity later today.

By Mr. Freed:

Q. Mr. Shanaman, you have previously testified to the low cost of power available at Portland, Oregon, and to the fact that the power costs in Portland are considerably less, perhaps by half, those those in the TVA area.

I wonder, in the light of these cost differences, these cost differences being an essential ingredient of the sodium chlorate production process, whether you could explain for us the historical price difference which has existed between [fol. 1706] sodium chlorate prices in the western part of the United States and those east of the Rockies.

A. No, it had no relationship to the cost of power, obviously, because cost of power from the outset at Portland, Oregon was less than the cost of power in the producing area of Niagara Falls, which was the only—which was the location of the only other producer of sodium chlorate in the United States.

I was responsible for setting up the sales pattern, and I merely took the existing schedules, which I found for the sodium chlorate, which originated in Niagara Falls, and which seemed to indicate that the one producer had a base price at Niagara Falls, and the consumer paid the full amount of freight to the destination.

I visualized, as a result of my market survey, that the main opportunities existing for a chlorate plant in the west would be in the Eleven Western States, and consequently I took the pattern of delivered prices from Niagara Falls, and determined that if I sold in the area of the eastern borders of those Eleven Western States,—on the most easterly of the eleven, that I would net back a price at Portland, Oregon, which I used as a pattern for making my estimates with [fol. 1707] respect to the economics of the plant.

In other words, I merely took the existing price pattern, I took our freight estimate from Portland, Oregon, to the outlying use destinations along the eastern perimeter, and worked back the net to our plant, and that is the basis on which we sold the sodium chlorate.

Q. Was freight included in the price that you set for Pennsalt?

A. No. What we did was to set a base price at our Portland, Oregon, plant, and it was always higher than the east

for the reason explained, plus the fact that we were never subjected to the dumping of sodium chlorate into the western area at the seaports in the west to the extent that existed on the east coast of the United States, because the European plants were tied fast to very cheap power not generated all year round.

Consequently, sodium chlorate, for example, in the hands of the French, was seasonal. Sometimes they produced during a season of excellent water conditions for production of hydroelectric power a considerable amount of sodium chlorate, and that had an influence on the eastern market, I am certain, and perhaps had something to do with the [fol. 1708] pricing of sodium chlorate by the Oldbury Chemical Company.

But I merely took what I found in the market place and made use of that to determine what our price should be, or at least, what we could receive for our sodium chlorate at Portland. It had no bearing on what we could buy power for.

Q. And when was the first time that sodium chlorate produced by a competitor became a factor in Pennsalt's western sales territory for this product?

A. When?

Mr. DeLone: Would you repeat that question?

(The last question was read back by the reporter.)

Mr. DeLone: Do you mean after Pennsalt had constructed its facilities?

Mr. Freed: Yes, sir.

A. I believe—I believe that the first time that we ran into any sodium chlorate where an equalization was made against our plant price at Portland, was following the Korean War. In other words, during the early fifties.

I believe it was the first evidence that we had that some chlorate was moving into the area and it came when they began the use of sodium chlorate for the—in the production of Uranium.

[fol. 1709] By Mr. Freed:

Q. And who were the competitors or suppliers of sodium chlorate when that phenomenon occurred which you have just described?

A. Phenomenon?

Q. When that competition started?

A. Oldbury Chemical Company.

Q. At that time was Oldbury still confined to its one plant at Niagara Falls?

A. I believe—I believe yes. I believe that the first effort to participate in the market out here came when announcements were made in the trade papers that processes in the production of Uranium were requiring sodium chlorate, and I believe that some of the distributors of chemicals in the Colorado area made arrangements to bring this sodium chlorate from Oldbury Chemical Company. Whether or not that preceded Oldbury's decision to build in the south, or after, I just don't recall.

Q. In the area of competition you have just described, if you can recall, did Oldbury use—did they use the eastern price or the western price?

A. I don't recall. I don't believe that there was any—I don't think their efforts were too strong, and if their prices were somewhat lower than ours, I think we disregarded it. I think that there was no real serious effort because their [fol. 1710] sales force actually was nil. Consequently when we ran across Oldbury Chemical Company in the industrial field, we paid very little attention to them, and if they had a different price than ours, we would rather lose the business than bother with them, because we knew that sooner or later the salesmen would probably forget to call around again.

Q. Oldbury during this period was not part of Hooker Chemical, is that correct?

A. No.

Q. When was it that a third productive facility, apart from the one at Niagara Falls and the one in Tacoma—the one at Portland, came into being in the entire domestic sodium chlorate industry?

A. Whatever the date was when the plant in Alabama was

opened by Oldbury, and which was subsequently taken over by Hooker.

Q. Are you referring to the plant at Columbia, Mississippi?

A. Yes, excuse me. That Alabama plant was Columbia, Mississippi, and that is the location of the Oldbury Chemical plant, and subsequently owned by Hooker. I mentioned Alabama—it is Mississippi.

Mr. DeLone: Would you read back the answer before that? There was some other reference there that I did not [fol. 1711] catch.

(Whereupon the last answer preceding was read by the reporter.)

By Mr. Freed:

Q. Was the construction of Oldbury's plant in Mississippi the first appearance of a plant designed to serve the pulp and paper industry's requirements for sodium chlorate, or had that occurred prior to Oldbury's Mississippi plant?

Mr. DeLone: The pulp and paper industry—would you define what you mean by that question?

By Mr. Freed:

Q. A demand by the pulp and paper industry in the United States.

Mr. DeLone: In the United States?

A. Well, I wish you would just repeat that, would you, please? I think I know what you mean, but I want to be sure.

(The last question asked was read back by the reporter.)

A. Mr. Freed, I don't feel that I should attempt to guess what motivated Oldbury Chemical Company and its owners, the Albright and Wilson Company in England to make a decision with regard to operating a second plant. I can answer your question which, I believe, that you have placed before me about whether the pulp industry demand for sodium chlorate preceded the building of the plant, or did [fol. 1712] it follow, and the answer would be that it defi-

nitely preceded the construction of the southern plant, and actually preceded it by a number of years, because the general investigation by the pulp and paper industry, as well as in the chemical industry, more or less on a world-wide basis, dates back to probably before the first World War, in an effort to bleach pulp with chemicals which would not deteriorate the fiber.

Sodium chlorate has long been investigated as a potentially good chemical for that purpose, because it has a certain amount of oxygen associated with it, which gave indication of having desirable properties if it could be converted in such manner as to make it economically suited to the bleaching of the various grades of pulp, and the breakthrough occurred in the Scandinavian countries and Germany, and with the Olin Mathieson Corporation in the United States preceding World War II, and following the war, apparently pulp mills, as well as some of the chemical companies, have continued their research, and by the end of the war it was evident that a considerable amount of sodium chlorate might be used for the generation of chlorine dioxide, and that actually has occurred.

[fol. 1713] I think as a personal opinion that the decision on the part of the Oldbury Chemical Company to move south was motivated by other considerations than the sale of chlorate to the pulp and paper industry, because sodium chlorate per se at that time could not be expected to be sold directly to the pulp and paper industry, because one had to have the process well worked out to make use of it for purposes of bleaching pulp, and Oldbury Chemical Company did not have such process.

Q. When did such a process first come into commercial acceptance?

A. I will have to venture a guess that it probably occurred during the very late forties or early fifties, commercially.

There had been some evidence of some breakthrough prior to that, and there had been efforts in Europe to make use of then existing processes.

Now, the Germans had one prior to the war, and I think the Waldorf Paper Company was making use of it. It was not what we consider by our standards a good one. It had certain economic objections as well as some hazards, as I

recall, and it was not until—it was not until the, I will say the very late forties, '48, '49, or the very early fifties, that [fol. 1714] the break-through came on a commercial scale with the generation of chlorine dioxide from sodium chlorate.

Q. When the break-through in chlorine dioxide occurred in the late forties, or in the early fifties, was it the Mathieson process that made that break-through in the United States?

A. In the United States, yes. Mathieson had done the lion's share of all investigations, to my knowledge, in the chemical industry related to the use of sodium chlorate for the generation of chlorine dioxide.

Q. Prior to this break-through, had Pennsalt's sales of sodium chlorate out of its Portland plant been of any significant size to the pulp and paper industry?

A. No.

Q. And beginning with the break-through, did that also constitute a break-through for sodium chlorate by Pennsalt?

A. No.

Q. When did Pennsalt first begin to feel the impact of the chlorine dioxide break-through?

A. We visualized that there was going to be a considerable amount of sodium chlorate required for the bleaching of pulp via the chlorine dioxide route. Consequently, we had followed the development of the bleaching art in Europe [fol. 1715] as well as in the United States.

We were very well aware of what was going on inside some of the more modern pulp mills. We, therefore, felt that we must keep abreast of the developments, so that we would be prepared to sell sodium chlorate when and as the chlorine dioxide process use became of commercial advantage to our pulp and paper industry, to which we had been captive at our plants in the Northwest with respect to chlorine and caustic soda.

As a result of that captivity we knew many who were at the technical level as well as the administrative level. The use of sodium chlorate developed a little differently than we had imagined, and we had hoped. Those who had developed a process in Europe saw fit to try to sell a process on a royalty basis, and Mathieson did likewise.

Not many of the pulp mills, to my knowledge, are very susceptible to a royalty payment, and as an industry they seem to fight shy of that sort of thing. Consequently, the Europeans, as well as Mathieson, found considerable difficulty in getting their processes accepted by the industry, and, to the contrary, the industry kept looking in the other direction for chemicals that would do the same thing which chlorine dioxide was supposed to be able to do; namely, to [fol. 1716] permit the mill to increase the brightness of the pulp without decreasing the strength of the fiber.

During that particular period a portion of the pulp industry used a certain amount of sodium peroxide; a certain amount of sodium chlorate—chlorine dioxide; and I believe Mathieson was selling their product, chlorite—they sold chlorite in small quantities and indicated that this chemical would do the same thing that chlorine dioxide would do—but it was more costly because of manufacturing problems—the transportation—and the packages.

After some few years of negotiation without too much success on the part of those who came to have acceptable processes, the Solvay Company came forward with a new method of producing chlorine dioxide, making use of methyl alcohol.

Instead of offering that process to the pulp and paper industry on a royalty basis, Solvay saw fit to offer it under a long-term contract, and by that I mean three to five years, and taking in return the opportunity to sell certain chemicals of their manufacture, and which subsequently included sodium chlorate, which they arranged to purchase from the American Potash and Chemical Corporation.

[fol. 1717] Their efforts in this direction met with some success, and it posed quite a problem for us at our Portland plant, because the Solvay Company was offering a method for generating chlorine dioxide tied fast to an obligation for the pulp mill to purchase the sodium chlorate requirements required by the process from Solvay exclusively.

I might say that because of friendships, knowledge, long experience in the pulp industry, we were successful in obtaining a small quantity of the sodium chlorate required by the two major mills in the Northwest, which had installed the Solvay process: namely, Puget Sound Pulp and Timber Company and the Potlatch Forest Products Company.

It became very evident to me that for us to sell sodium chlorate in our area, where we had many pulp mill friends, that we now had to involve ourselves with a process, and we set about to develop one ourselves, or buy one.

We sought such opportunities in Europe, and we also developed a mobile chlorine dioxide unit of our own, but it was a small and inadequate bit of technical competition for Solvay or Mathieson, or the Europeans, because of our lateness in coming in, and the crash program that we had to—had in effect tried to obtain a competing process.

[fol. 1718] Does that answer your question?

Q. Yes, sir, very eloquently, I should say.

When, to your knowledge, did Solvay first begin to use this contract which requires the chlorine dioxide license to purchase it?

A. I think I first heard about it during the early fifties. I think the first time I heard about it was in their efforts to put one in the Regal Paper Company, back east.

Mr. DeLone: Did Mr. Shanaman put a date on that?

A. Early 50's. That is my recollection of it. I was rather closely identified with the technical association of the pulp and paper industry for a number of years. I operated as its local secretary-treasurer out here, and consequently, I had a rather close look at what was going on in the industry, because I was obliged to attend all the meetings. So I was quite familiar with progress being made by companies like Solvay and Mathieson with regard to the chlorine dioxide process.

I think that the early fifties would be a good guess as to when the first commercial installation was attempted by Solvay.

[fol. 1719] Q. To your knowledge, for how many years thereafter did this tie-in contract persist?

Mr. DeLone: Well, now, would you just describe it as the contract previously referred to, because I do not think the witness has characterized it, and I don't think he intended it. He does not know the precise terms, nor did he intend to express any legal opinion as to its propriety.

Mr. Freed: I will be happy to withdraw the question.

By Mr. Freed:

Q. To your knowledge, Mr. Shanaman, for how many years after the early 1950's did Solvay continue to grant its license on the understanding that the requirements of sodium chlorate of the licensee would be purchased from Solvay?

A. Mr. Freed, I don't purport to know whether Solvay has ever discontinued what they were doing on a national plane or international plane. Therefore, I wish you would consider my remarks as related exclusively to the Northwest area where I was primarily interested because of my sodium chlorate production.

We first were very unhappy and somewhat humiliated over the fact that we had several of our very good customers using chlorate which did not originate at Portland, and we, therefore, sought opportunities to correct that situation so [fol. 1720] that our friends would be using our chlorates, and as I previously stated, we were successful in obtaining a small amount—token amount of chlorate from both accounts, primarily because of friendship, and also the buyers, our friends, were convinced that our sales logic seemed to make sense, that if transportation was interrupted from a source of supply at Henderson, Nevada, it would be to their advantage to have a second source and close at hand, at Portland, Oregon.

Now, whereas we were told that the contract was exclusive in nature, I never saw it. I do know that both mills felt so strongly about a second source of supply that they purchased from us, and if there was an exclusive feature, it was in violation thereof.

We set about to correct the situation that I have mentioned with regard to a process dictating who was going to use sodium chlorate, and from what source, and I initiated an approach to the Mathieson—Olin Mathieson by that time, by making an appointment to call on John Logan and Don Drummond.

I had known these fellows for some years, and I knew, as I previously stated, that Mathieson had not capitalized on the tremendous amount of work and very heavy expense that had been incurred in the development of the

[fol. 1721] chlorine dioxide know-how, which they possessed.

I felt that we could give them an answer in this part of the country, at least to the problem which they had in competing with Solvay. So I offered to push the Mathieson process for chlorine dioxide generation along with our effort to sell sodium chlorate, and because we were active in a sales way, five days a week in and out of the pulp mills constantly, I was convinced we had a better opportunity to establish Mathieson's chlorine dioxide process in the pulp and paper industry in competition with Solvay than they could themselves.

I perhaps caught them in a time when they were susceptible to flattery or to making an arrangement, and they accepted my views, and they gave me the opportunity to use my sales force for the purposes I have just described.

I, therefore, say that our technical service people and our sales people did an excellent job, because I think the record, if it exists or can be reviewed, would show that whereas we had a very, very modest amount of sodium chlorate to sell to the pulp and paper industry in the Northwest in the early 50's, we in due course not only participated in the requirements of Puget Sound Pulp and Timber Company [fol. 1722] and the Potlatch Forest Products, but we installed the Mathieson system in every other mill that I know anything about in the Northwest from the time that we made the arrangement with Mathieson to work on their process.

There is not another instance, to my knowledge, where Solvay was successful in putting their own process up here in the Northwest, because we offered the service that was necessary, and we also had the chlorate in their own back yard, and we were offering something that was not duplicated by the competition, the combination of Solvay and American Potash.

Subsequently we obtained all of the business, the sodium chlorate business at both Puget Sound Pulp and Timber and the Potlatch Forests, because we took the natural advantage of knowledge that the contract with Solvay was not a perpetual affair, and we made available to the pulp mills liquid sodium chlorate from our Portland mill, so that the mill had

a very, very definite advantage in doing business with us rather than doing business with Solvay or American Potash. So we drove them out of here economically by the fact that we manufactured sodium chlorate in liquid form, and it would be a rather prohibitive freight pattern for them to meet that type of competition with a solid material.

[fol. 1723] We simply took advantage of our natural location, and we made deliveries to the mills in tank wagons, which, certainly, they couldn't do, and it was, therefore, a rather foregone conclusion that after the—after the first contracts ran their course for Solvay, that they would have difficulty maintaining a position in this particular area.

Q. Well, what were the advantages that you sold or attempted to sell to Olin in them giving you the Mathieson process to use?

A. Well, I think I was successful in convincing them that I could do something they weren't doing for themselves.

They had appeared in a number of TAPPI—Technical Association of Pulp and Paper Industry—articles, and had given a lot of free information concerning something that was of great interest to the pulp and paper industry, but the fact remained they couldn't sell it, and they were attempting to, as I stated, sell it on a royalty basis, which didn't go.

Solvay sold theirs on a basis of installing the equipment at their expense and then amortizing it over the period of the contract period, and——

Q. (Interposing) I am sorry, sir. Installing the equip-
[fol. 1724] ment at their expense,—Solvay paid for the equipment?

A. I think they paid for a portion of it, and the mill paid for a portion of it, and they provided all of the engineering expense free of charge, and in return for which, I believe, they were given a contract for so many years to take care of the chlorate, and maybe some other things I wouldn't know of. I never have seen one of their contracts.

But Mathieson, apparently, at that stage had no definite program to combat Solvay, and we provided them a means of at least trying something which apparently wasn't being tried elsewhere, and I think that the record speaks for itself, that we were somewhat successful in doing what they wern't doing for themselves.

Q. In what way was Olin competing with Solvay at that time apart from whose process would be installed at a particular plant?

A. I wouldn't know that, Mr. Freed.

Q. I asked the question because you referred to Mathieson as competing with Solvay at that time but not doing a job for themselves.

A. On a process—on the process, competing in the sense that both had a process, and both had something to sell. [fol. 1725] Mathieson had attempted to sell its process on the basis of receiving a royalty from the pulp mill per ton of product produced by the use of this process.

Solvay, a competitor, its only competitor at that time, to my knowledge, competed on the basis of not charging the royalty, and Mathieson did not seem to have the answer, apparently being reluctant to give up the idea of it, and I think that by the time that I spoke to the gentleman in Baltimore, that they were somewhat convinced that they had spent an awful lot of money to develop a process, and apparently weren't going to receive anything from it, nor would they have the pleasure of seeing the process used in the pulp industry, which is rather significant in this particular industry, because it is much better to have something installed in a pulp mill so that you have an opportunity to have you own people going there in a technical way, or a sales way, than to attempt to influence the pulp industry by the medium of advertising.

Q. At the time you negotiated the original chlorine dioxide license agreement with Olin, the agreement included a royalty provision?

A. A very, very nominal one. As a matter of fact, it was, [fol. 1726] I think, more of a face-saving thing than anything else. It was, as I recall, peanuts.

Q. It was 50 cents a ton?

A. Something like that.

Q. Because it was peanuts, what did Olin stand to gain in the Northwest from your promotion?

A. The business they would expect to get. After all, I had known these gentlemen a long time. If I could be pardoned for using the personal equation, I think they had a measure of confidence in my ability to do something that I said I thought could be done, and I believe that they were willing

to see whether or not I could do it; and since the cost would be nothing for them, I think that they had to put some sort of consideration into the agreement, and they put the amount in there wherever it tied fast to the sodium chlorate sales, which we all recognized would be rather nominal, and it was.

Q. Well, I believe, sir, you have testified to the very great importance that this—or contracts between you and Mathieson, had to the installation of the Mathieson process and the promotion of Pennsalt sales, but in terms of the advantage to accrue to Olin from having its process installed in paper mills of the Northwest, what did they look forward to?

[fol. 1727] A. Well, if I could prove to them that there was a way of selling their process in competition with Solvay, perhaps they felt that what we could do, maybe they could do, and maybe that they perhaps had been living so close to the forest that they couldn't see the trees, and maybe if we could do something, certainly it wasn't going to cost them anything. So I think they took one corner of the United States and said, "Well, let that fellow go ahead and do it, and we will see how he makes out."

Q. At the time of your original discussions with Mr. Logan and Mr. Drummond, was there any discussion of the manner in which this technique you were pioneering might be used in other parts of the country?

A. No.

Q. Do you recall when the first time was that Pennsalt considered building a sodium chlorate facility in the east?

A. Well, I—that has been a long-drawn-out procedure. We have had organization changes which upset the continuity of consideration for the project. I couldn't put any date on it.

I would say that it commenced almost from the time that our chlorate operation became really successful out here on the West Coast, and I think that this idea of chlorate in the [fol. 1728] other parts of the country kept reoccurring.

But we had changes in top management of our corporation, several during the time of this consideration, and I think that probably threw it off, and delayed it, because there are more important things to consider than, perhaps,

the building of an additional plant in other parts of the country, which requires a considerable amount of study.

Q. When, to your recollection, did it first become apparent to Olin that your efforts with the chlorine dioxide process in the Northwest was successful enough to be tried out in other parts of the country, if you can recall any conversations?

A. I don't recall that that was ever discussed at any time in my presence. Certainly, they were never that complimentary, to tell me they thought we had done such a fine job, and now they were going to try something different.

I think they were somewhat surprised, and I think that they were perhaps pleased with what we had been able to do in combatting the efforts of Solvay, and also American Potash.

I couldn't put my finger on any dates. I would say that they probably came to the realization that we were being [fol. 1729] successful when they learned through channels inside the pulp and paper industry that certain substantial people in the Northwest were about to install the Mathieson system as compared to Solvay.

After all, Solvay, from the very earliest years, had a tremendous advantage by reason of the fact that they had the two installations and then had very frequently, very competent technical people in this area calling on other pulp and paper mills and pointing to the fact how successful the chlorine dioxide operation had been at Puget Sound Pulp and Timber Company and Potlatch.

I am sure that Mathieson—Olin Mathieson knew that—and under the circumstances, when we made our first installation for Mathieson, or used the process, not for them, but used their process, they, naturally, were made aware of it; and I think they followed probably the course with some interest, and I think that they became aware also of the fact that Solvay was not making any other installations—that it was only Mathieson, through our efforts.

(Whereupon, a short recess was taken.)

[fol. 1730] (Whereupon, Plaintiff's F. C. Shanaman Exhibit Number 1 was marked for identification.)

By Mr. Freed:

Q. I believe, sir, that you have testified that the Oldbury plant in Mississippi was, to your knowledge, the third sodium chlorate plant built in the United States.

Can you trace——

A. (Interposing) I think, as I recall the questioning, you were speaking about those in the east at the time when we were identifying the location at Columbus.

Prior to building the plant by Oldbury at Columbus, Mississippi, of course, we had some sodium chlorate produced out here during the war, and following the war we had a continuation of the operation in the hands of the Western Electro-Chemical Corporation, which got started in Los Angeles and then subsequently moved into the plant for the production of magnesium at Henderson, Nevada, and it is there where they produced the sodium chlorate, and subsequently the ammonium perchlorate.

Mr. DeLone: You made reference to a war. Which war are you talking about?

The Witness: The Second World War.

By Mr. Freed:

Q. In light of your last response, then, was Western Electro-Chemical, and subsequently, American Potash, in [fol. 1731] competition with Pennsalt's Portland plant at all times beginning in 1941 and on?

A. During the war, yes, they were in competition, running from the very beginning from the time they got started in a very modest way in Los Angeles.

Although, I think by choice, at the outset they sought to export their chlorate because of the very, very high price that they could get for their product. Because of their smallness of operation, it would have been very difficult for them to sell at the level of our sales price, and the frozen prices that we had. They probably sought opportunities, and successfully, in Mexico and elsewhere, for their chlorates.

Q. When you speak of export, are you referring to sales outside of the United States?

A. Right.

Q. Then at the time you initially set your sodium chlorate

price at Portland, the existence of Western Electro-Chemical was not a factor?

A. They were not existing.

Q. They were not in existence?

A. No.

Q. In your recollection, did Western or its successor, American Potash, ever at any time influence the price that [fol. 1732] you set for Pennsalt's sales of sodium chlorate?

Mr. DeLone: You have reference to their Henderson, Nevada operation?

Mr. Freed: Yes, sir.

A. When we sold our chlorate into the Utah area, we had to be mindful of the freight rate from Henderson, Nevada, and we would equalize against it in the event that we found business in the area where they were a primary producer and supplier.

Where we ran across a delivered price that was lower than our base price at Portland, plus the freight, we equalized against same.

To that extent, we were conscious of their existence and their pricing, and so on.

Mr. Freed, for your enlightenment with regard to American Potash and Western, just prior to the time American Potash acquired it, they were primarily producers of sodium chlorate to supply the needs of the ammonium perchlorate plant, which was installed to supply the Government.

During the time when the Government was not demanding ammonium perchlorate, they chose to continue the operation of the sodium chlorate plant, and they did produce an irregular amount of sodium chlorate, which they at those times offered in the market place.

[fol. 1733] It was not a great amount. They sold it through—mostly through distributors, such as Chipman Chemical Company, the distributors in California.

But those distributors never could rely on a continuity of supply from that source. So it never was an important factor for us to consider, and consequently, their influence on the price pattern out here was negligible, except where we might run across them in an area where maybe some mining company would tell us, "we can buy this cheaper from Henderson, Nevada," and would disclose to us what

the freight rate happened to be, and so on, and we would equalize it.

If we wanted the business, we didn't let it go on to American Potash.

Q. The factors which you just mentioned with regard to the significance of American Potash's competition explain the uniformity in Pennsalt's sodium—bulk sodium chlorate price of $9.00 per ton, which, according to Pennsalt's answers to interrogatories set three, item 22, has been $9.00 a ton since 1951?

A. I should think so. It certainly had a bearing on it. I wouldn't say it was the only reason. It certainly had a very —for the very reason we were conscious of the fact that when they were producing perchlorate they certainly didn't [fol. 1734] have sodium chlorate, and since the trade that would use it, the Uranium people, for example, aren't going to tie fast to an irregular supply.

So, if they could buy a small amount of sodium chlorate from American Potash and it was cheaper than ours, it would be simpler for us not to reduce our price to meet it, unless we actually needed some business so badly we wanted to meet that competition, and which usually wasn't the case.

Q. Since 1951 has there been any significant change in the cost of production or any of the other ingredients that go into making up that nine dollar price?

A. There have been increases in labor, there have been increases in the cost of delivering a ton of salt, and increases in other services that are required for the production of chlorates, but those have been offset by technological developments, and also expanding of the plant.

So, we are producing more, and consequently the cost of our spread—administrative costs are spread over a larger number of tons.

* * * * * * *

[fol. 1735] Q. Could you recall for us now the basis on which you were successful in extending the chlorine dioxide agreement with Olin?

A. Well, I think that I—I hope I may be pardoned for saying that I think we did such a damned good job for them, they were very glad to extend the agreement. It has nothing to do with these comments I made with regard to the second

paragraph. There has never been any tie-in between sodium chlorate and—supplied to them and the fact that we had an opportunity to make use of their process for generation of chlorine dioxide.

As I have stated previously, I initiated the idea of making use of their process, and I hope, and Mr. Logan agrees with me, that we did a rather creditable job for them.

As I stated also previously, we had at times some excess chlorate, and I offered Mr. Logan an opportunity to sell through his sales organization approximately 2,000 tons. I am sorry to say he didn't always make good on selling it, but I think he did a rather creditable job of helping to market some that we had in excess until such time as our market developed to the point where we no longer felt it advisable [fol. 1736] to commit any particular amount for him, and that time was going to appear in the foreseeable future as it was with regard to supplying chlorates to our own Philadelphia sales department.

Q. What was the occasion that brought you and Mr. Logan together, as referred to in the first paragraph of this memorandum, Exhibit 26?

A. I think that my recollection is that I had been discussing with him the idea of extending or changing or negotiating something with regard to our existing arrangement with respect to handling the Olin Mathieson chlorine dioxide process.

Q. But the chlorine dioxide agreement had been dated in mid-July—in July, 1953, and this was towards the end of 1957.

What produced the discussion at this period, four and a half years, or less than four and a half years after the original agreement?

A. If I may see the original agreement and see the second agreement, I might be able to comment on it.

Have you got copies here?

Mr. DeLone: Off the record.

(Discussion off the record.)

A. It is my recollection, Mr. Freed, that during the intervening period from July, 1953 from this original agreement [fol. 1737] was signed by Mr. Drake, that by 1957 certain

requests for alteration of the agreement had been made by Mr. Logan, and I think that the new agreement entered into in 1956 purports——

Mr. DeLone: 1956?

A. (Continuing) 1957, excuse me,—October 7, 1957, purports to take care of that situation or situations.

In other words, as I recall it, we had rather broad rights involving all areas where we might want to sell or make use of a process—not sell, and this particular letter of October 7, 1957, specifically limits where we had these continuing privileges for the next five years, and Mr. Logan had requested consideration of the fact that they wanted some direct dealings which might prove to be conflicting with our own in certain areas, and I believe this is a confirmation of what Mr. Logan had requested us, and we had no reason to resist anything that Mr. Logan might desire with regard to appointing someone else in the territory where we might not be particularly active.

If it happened to be South America, or in Japan, or in Canada, or wherever he might want to appoint someone else, if it was to the benefit of Olin Mathieson, we had no reason [fol. 1738] not to agree to it, and I think that, as I recall, this particular letter was merely modifying the original one to the extent of his desires.

Q. Was there any discussion, as far as you can recall, in terms of changing this scope of or character of the agreement insofar as it applied to the United States?

A. No, no. It remained, as far as I recall, exactly as it was previously.

Q. Prior to the time that you discussed the renewal agreement with Mr. Logan, had Olin, to your knowledge, licensed anyone else in the United States to use the Mathieson process in the same way that Pennsalt had been licensed?

A. No, I don't know if they did. It never came to my attention.

Q. And do you have any knowledge of Mathieson ever authorizing any other company, other than Pennsalt, to use——

A. (Interposing) I had knowledge of the fact that they were negotiating in other markets with someone else not identified by Mr. Logan, and—but he did say that by reason

of certain activities of the Olin Mathieson Corporation, they would like to be free to negotiate with someone else, and we [fol. 1739] had no objection to their negotiating with someone else.

Q. When you refer to the "other markets," do you mean, again, outside the United States, or within the United States?

A. Outside the United States, and if they had wanted to negotiate with somebody else by 1957, I don't think in the United States we would have seriously objected.

Q. What is the meaning of the reference in this second sentence of Drake Exhibit Number 26 to your report that you were successful in extending your agreement with Olin for five years in connection with the exclusive use of Olin's chlorate equipment in the pulp and paper industry?

What did "exclusive" refer to?

A. "Exclusive" simply meant that that was the nature of the agreement when we first made it. It was of no major importance to us by that time to have an exclusive feature, because we had already been identified with the process which could be installed in pulp and paper mills, and the pressure of the Solvay position had deteriorated somewhat by reason of our efforts to sell and supply sodium chlorate in mills in liquid form here in the Northwest, and since our main interest was related to the Northwest, there was no reason for us to take a contrary point of view with what [fol. 1740] ever Mr. Logan desired in that respect.

Q. But I wonder if you could explain to us what Pennsalt had that was exclusive insofar as pertained to the Olin Mathieson chlorate equipment process?

A. When we first started, we felt that in the Northwest we should have a process exclusive as far as representing Mathieson on their chloride dioxide system in the particular area which we served with our sodium chlorate, and we had that, and we made use of it to a good advantage, because, as I stated this morning, we were placed at a very definite disadvantage when we didn't have something to talk about in competition with the Solvay position, which I have discussed, and with something to talk about, as long as we had the exclusiveness with regard to the use of the Olin Mathieson process in the area in which we considered other markets for sodium chlorate manufactured at Portland, we were

quite content, since our—in our experience by 1957 it had definitely disclosed that we were not in a position to market a process of this nature in a foreign field.

Q. At the time the agreement was renewed with Mr. Logan, was there any discussion of Pennsalt's right to use the Mathieson process in sodium chlorate sales east of the Rocky Mountains?

[fol. 1741] A. No, I don't recall the subject ever came up at all.

Q. Was it understand between you and Mr. Logan that Pennsalt did have the same exclusive right to use the process east of the Rockies that it had west, or was it a different understanding?

Mr. DeLone: You said at the time of renewal, and he has not testified that there was any exclusive right granted at the time of the renewal, as I understand his testimony.

It seems to me your question is improperly phrased in light of his previous answers.

By Mr. Freed:

Q. Perhaps there is a misunderstanding, Mr. Shanaman.

Would you read the second sentence of this memorandum into the record, and state again——

A. (Interposing) I am quoting from Mr. Willits' memorandum to the file, dated December 5, 1957, and in quotes, "He also reported he had successfully extended our existing agreement with Olin Mathieson for five years in connection with the exclusive use of Olin Mathieson's chlorate equipment in the pulp and paper industry."

Reaching out and picking a portion of my statements which may have been made at the time of that meeting, I think it is not exactly kosher as far as Mr. Willits is con-
[fol. 1742] cerned with respect to what was discussed with respect to our meaning—the meaning of our—and I am referring—I did refer, and I meant to refer to the fact that our men out here—Pennsalt's position out here with regard to the use of Olin Mathieson—and Olin Mathieson was being told in our agreement that we would represent them exclusively on the Olin Mathieson chlorate equipment in the pulp and paper industry, and no one else, because we were, by

that time, rather well identified with the installation of the Olin Mathieson chlorate process and equipment.

Q. And was there any change made in the 1953 agreement of your renewal with respect to your exclusive use of the Olin Mathieson process?

A. Not to my knowledge. We had virtually the same position as we formerly had.

Q. And my next question then is whether there was any discussion between you and Mr. Logan as to the application of this agreement outside of Pacific—the eleven Pacific States?

A. Never. At no time did Mr. Logan or I ever discuss the idea that we were going to attempt to extend

We had the right; but at no time did we; I suppose, by reason of the wording, we could have had we wanted to do [fol. 1743]. so. But we certainly had no intention of doing so, by reason of the fact that we were not equipped with the necessary personnel to do a job in other sections of the country, and certainly there would be no real benefit to Pennsalt in exercising the privileges under the contract to make use of the Olin Mathieson process outside of the Northwest—in the area contiguous to our chlorate operations at Portland, Oregon.

Q. Well, the second paragraph of the memorandum reads:

> "Mr. Shanaman satisfied Mr. Logan that supply"
> —referring to 2,000 tons of chlorate——
> "would be available in that should we decide to build a chlorate plant in the East, it would undoubtedly take two or three years before production from that facility would be available."

Can you recall what you told Mr. Logan about Pennsalt's —about the state of Pennsalt's plans to build a chlorate plant?

A. Yes, I think I can.

Again, let me preface my remarks by saying again I think it is rather unfortunate that Mr. Willits lifted a portion of comment without elaboration, but nevertheless I am. ad- [fol. 1744] dressing myself to what is here, in response to your question.

There are two separate portions to this particular memorandum.

One relates to my announcement in the meeting that I had just concluded the new agreement to—extension of the agreement with Olin Mathieson for five years, and for the reasons that I have just explained.

Secondly, I announced to those present that I had persuaded Mr. Logan to very seriously consider the sale of some of our excess chlorate from the West into the market in the East, and which I thought his sales department should be able to sell without great difficulty, because of their well-established position, particularly in the Southeast; and because of my knowledge of the fact that the demand for chlorine dioxide was being expanded in the bleaching of the craft pulp in the Southeast, and that 2,000 tons, which I might have available from our Portland chlorate production, would not be an unreasonable amount, in my opinion, to attempt to sell.

Now, to me this represented as much of a sales pitch to Logan as a sales pitch could be considered for any pulp [fol. 1745] mill or anyone else that might be a potential user or buyer of sodium chlorate.

The 2,000 tons of sodium chlorate, which I discussed with Mr. Logan, had nothing whatsoever to do with the agreement to have an exclusive arrangement with respect to their process or equipment; nor did it have any bearing on our agreement to continue to push their process, and to my knowledge, it never had any relationship whatsoever to their willingness to grant us a continuation of the use of their process, should we care to do so.

I think that is about as much as I can say on it.

Q. Do you recall telling Mr. Logan what the status of Pennsalt's plans to build a sodium chlorate plant in the East were?

A. I never discussed the status with Mr. Logan of any of our plans with regard to chlorate. I merely, as I believe I stated this morning, extended Mr. Logan the courtesy, which I feel others would have extended to me, including Mr. Logan, that making a request for him to market a product through his sales force, in which I had confidence, that they could market some excess chlorate for me without injury to anything else that they might be doing.

[fol. 1746] I felt it incumbent that I grant him the courtesy of telling him that should we at any time decide that we were going to build a plant other than at Portland, Oregon, that I would tell him so, and I think he would be entitled to that courtesy.

Q. As of this time had Pennsalt made a decision with respect to building a plant in the East?

A. I never knew that any decision had ever been made to build a plant in the East, Mr. Freed, in 1957 or '58, at all. I certainly, to the contrary, believe that no decision had been made.

Q. And at the time of this meeting with Mr. Logan, the question of building a sodium chlorate plant in the East was still under consideration by Pennsalt, is that correct?

A. I think it was a continuous consideration dating back to the early nineteen fifties, until the date of this memorandum. I don't think it stopped then, either.

. . . . . .

[fol. 1747] Mr. Freed: I would like to have the reporter mark as Plaintiff's F. C. Shanaman Exhibit Number 10 a letter dated January 14, 1958, from Mr. Logan to Mr. Shanaman.

(Plaintiff's Exhibit Number 10, F. C. Shanaman, marked for identification.)

(Document was handed to the witness.)

A. Yes, I recall that, and I recall the discussion that I had with Mr. Logan.

By Mr. Freed:

Q. Can you tell us what that discussion was, sir?

A. I told him that the sale of sodium chlorate as a weed-killing agent to the railroads involved a great amount of experience and service such as was rendered by Chipman Chemical Company, Reed, and also Boyle, who were very well equipped with the special equipment necessary to render the type of annual contract weed-killing services demanded by the railroads in the United States; and that this, therefore, was something that I did not feel that he should

[fol. 1748] attempt to engage in, and I undoubtedly recited our own experience with regard to the investigation of the railroad weed-killing purchases, and which I touched upon previously, when I was referring to the Chipman Chemical Company.

Q. What was the nature of the arrangement referred to there with Mr. Logan insofar as the customers to whom Olin Mathieson might sell the sodium chlorate or the say that Pennsalt might have in Olin's choice of customers?

A. Nothing. We didn't tell them where to go, or tell them how to do anything. I merely felt it incumbent upon me to tell Mr. Logan at any time if he suggested to sell chlorate, and if I thought that it was going to involve something of which he had no knowledge, and certainly he has no knowledge when he refers in the last sentence of paragraph two that he would talk further with Roy or Bryan Shera. Neither had had any experience or knowledge of the chlorate usage in railroad weed-killing.

When I first got started with chlorate in Portland, I thought I could sell a heck of a lot of sodium chlorate to the railroads, and I found out that I was completely wrong; and it also had been included as one of the ideas in my original [fol. 1749] market review for the Eleven Western States, that there was a substantial amount of chlorate which was used by the railroads, and which we probably could sell to replace the chlorate being supplied by the Chipman Chemical Company.

I felt that in this Western area we had a considerable amount of freight leverage which we could use, but I found, much to my surprise, that the freight leverage did not transcend the desires of the engineering department of the railroads to make use of the facilities offered by the Chipman Chemical Company, and others, and the application methods, covered by contract, which we were not prepared to engage in, because of the necessity of having specialized equipment—specialized equipment, specialized personnel, and also a know-how which did not exist with us, and I passed that information along to Mr. Logan.

I presume that he was referring to the fact that he might —might believe that he could influence a certain amount of business with the railroads because of his freight picture, and which he soon would find was fallacious.

Q. Can you recall for us any facts that are known to you why Mr. Logan would say that he was "not sure this was [fol. 1750] included in the intent of our arrangement with you"?

A. Yes.

The question had never arisen with regard to where he was going to sell 2,000 tons, or whatever quantity of chlorate I discussed with him.

I did say that I thought his sales department was equal to the job of moving it. I didn't put any restrictions at the time on it.

I did tell him that we would certainly be glad to consult and help him, and I think I was doing a fairly decent job of consulting with him and giving him advice against getting enmeshed in something where he couldn't succeed, and I wanted him to succeed rather than fail, and I think he would have failed if he'd got involved in this sort of thing.

Q. Do you know whether the opportunity referred to here by Mr. Logan was an opportunity to serve a customer who was already being served by Pennsalt?

A. I don't, no. We did not serve any railroads. We had handled all of our chlorate through Chipman Chemical Company, or Boyle, or Reed, or one of the others.

Q. And through those companies did you serve customers [fol. 1751] in the Eastern part of the United States, as well as the West?

A. No, we served them out here. They bought for Western railroads. If they ever took any chlorate East, it probably never went farther East than Chicago, and it was then in the hands of the Chipman Chemical Company, which profited less because of the long haul, and the freight equalization, and I think they only made use of chlorate in that area when they were very short of chlorate from other sources.

I think it cost them more to use our chlorate for weed-killing in the Midwestern area than it cost them if they purchased from Oldbury Chemical Company.

Q. Then, is it your testimony that at the time of that inquiry from Mr. Logan, you did not know who the customers were that he had in mind?

A. No, he certainly made no mention of railroads, and I

answered it accordingly. I don't recall that he ever disclosed who he had in mind.

Q. Was the contract which you had with Chipman at the time an exclusive arrangement insofar as the furnishing of sodium chlorate to railroads for weed-killing purposes was concerned?

[fol. 1752] A. No, we can sell to anyone. We did sell to them on the basis of their specialized service, but we encouraged them to use our chlorate in our area, rather than purchasing it from other sources.

Q. And did Chipman undertake to do that for you, to sell only your chlorate in the Pacific Northwest area?

A. Yes, they did the same with AmPot in the South, and I think they did the same thing with regard to chlorate from Oldbury, and chlorate subsequently from Hooker, I presume, in the Southeast.

I know they didn't get chlorate for some of those Eastern railroads from us, so I presume they must have received it from one of the manufacturers elsewhere—any other part of the country.

Q. To your knowledge, did Pennsalt ever sell any sodium chlorate for weed-killing purposes to railroads directly?

A. No, I don't know that we ever did. I think we tried, and mighty hard, in the beginning, and whether or not I was ever successful in selling any, I just wouldn't know. But I do know that it was a very discouraging effort that I received in trying to interest the railroads in doing business with us, because I quickly found that they purchased [fol. 1753] practically no sodium chlorate direct. But they bought it in combinations, which included the service.

Q. In light of the difficulties which you were having with the railroads, can you tell us why, instead of discouraging Mr. Logan on these sales, you did not offer to assist him in making sales of sodium chlorate in an area in which Pennsalt had not previously sold?

Mr. DeLone: I object to the form of that question, "In light of the difficulties which you were having."

This witness has testified that when he first went into the chlorate business, that is, in 1940, he tried, and was unsuc-

cessful, and after that sold to Chipman, which in turn sold it to railroads.

There is no testimony that I understand of difficulties he was having with reference to the railroads in 1958, eighteen years later.

I think the question is, therefore, improper.

Mr. Freed: I will withdraw the question.

By Mr. Freed:

Q. I will ask you, Mr. Shanaman, in light of the fact—and correct me if I misstate the facts—that Pennsalt was not at this time selling sodium chlorate for use by the railroads in the East for weed-killing purposes, why did you [fol. 1754] not pick the opportunity offered by Mr. Logan to——

A. (Interposing) He didn't offer any opportunity. You—he merely asked me the question, "Do you think I can sell—I think I have an opportunity," and I certainly didn't believe he knew what he was talking about, and subsequently it was proved to be just that.

It is a very correct assumption on the part of anyone looking at a use that is large that they can participate. Investigation subsequently could prove that there are some tricks involved that would eliminate you from participation, and I had learned that, as I explained, and I passed that information along to Mr. Logan, as I feel that was the nature of our understanding, and at any time that he needed help or information, I would give it to him; and I think I gave him exactly what he should have had.

Q. What I don't understand, sir, is, in light of your statement that you did not know the identity of the customers——

A. (Interposing) It would not make any difference, Mr. Freed, who in the hell it was in the railroad industry. He just isn't going to sell sodium chlorate, per se, to any railroad in the United States.

He apparently thought all he had to do was just go and sell sodium chlorate, and it just isn't done that way. [fol. 1755] He would have to make a formulation, and consequently, when this was disclosed, he agreed that he was probably off base in even thinking about the subject, be-

cause there are other places where he could sell sodium chlorate; but I did not believe he was going to sell any in the railroad field.

. . . . . .

[fol. 1756] Mr. Freed: I would like the reporter to mark as Plaintiff's F. C. Shanaman Exhibit Number 14 a letter from Mr. Logan to Mr. Shanaman dated June 16, 1958.

(Plaintiff's Exhibit F. C. Shanaman Exhibit Number 14 marked for identification.)

By Mr. Freed:

Q. Mr. Shanaman, does this letter refresh your recollection on the efforts, if any, which were extended by Pennsalt to Olin in connection with the sales of sodium chlorate to [fol. 1757] Brunswick Pulp and Paper Company?

A. No, I believe Mr. Logan is referring to the fact that I was sort of jogging him up on the fact that he was not selling as much chlorate as I thought perhaps he should during the year of '58, and I was suggesting to him that if there were any mills out here where we had any particular friendships, that we might be of assistance to him, and I probably mentioned to him Scott Paper Company, and that is what he is referring to here, because they were a part owner in the Brunswick Pulp and Paper Company, and we had been their sole supplier for many years up at the plant they took over at Everett—the old Soundview Pulp Company.

Mr. DeLone: Everett, Washington?

A. Everett, Washington.

And he returns the comment that they have concluded an arrangement with the Brunswick Pulp and Paper Company for 600 tons of chlorate, and this is equivalent to about 50 per cent of their requirements. So he indicates that we are on the track at Brunswick, "I will initiate steps on the other mills you've mentioned."

I do not recall the other mills that I mentioned. But I [fol. 1758] presume they referred to mills in the South which were owned and operated by companies here in the Northwest, such as Rayonier, Crown Zellerbach.

Q. Was Waldorf one?

A. Waldorf? I don't know. I don't know whether Waldorf is one. I think that our activities with regard to Waldorf in Montana came after that date. I couldn't tell you.

My recollection is that Waldorf was not one where I personally could help.

Maybe Mr. Shera or Mr. Fisher might have been able to help by reason of certain technical assistance they gave to Waldorf in the Midwest.

Q. Can you recall whether Union Bag was one of those in which you had contacts?

A. It could be, because I think that we have been in a position to be of assistance with Union Bag. It could be, yes.

Q. Can you tell us what the nature of the assistance was?

A. Through the administrative officers of the company. We might assist by reason of friendships.

Q. Was Gulf States one of those that you mentioned to Mr. Logan?

A. I wouldn't know.

[fol. 1759] Q. How about Champion Paper Company?

A. No, I don't think we have any position at all with Champion. As far as helping them in any way, I certainly lost my only contact with them when Dr. Murdock left.

Q. Do you recall which of the mills you have just mentioned you actually did help Olin on?

A. No, I don't. I don't recall that we helped them on any of them.

Q. Your testimony is that you have no recollection of your own of you, yourself, actually carrying out the assistance that you offered to Mr. Logan?

A. Correct. I do not recall that Mr. Logan requested any assistance, and if he did, I do not recall that I ever gave it to him. I hope he did, and I hope I gave it to him.

Mr. Freed: I would like to ask the reporter to mark as F. C. Shanaman Exhibit Number 15 a memorandum dated September 8, 1958, from Mr. Land, to Mr. Shanaman.

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[fol. 1760] Q. At the time in 1958 that you were furnishing sodium chlorate to both Olin and Pennsalt in the East, was it your understanding that Olin and Pennsalt would compete in the sale of their sodium chlorate to potential customers in the East?

Mr. DeLone: I object to the form of that question. The reference to their sodium chlorate is to me completely meaningless.

Mr. Freed: The sodium chlorate made available to each of those companies in the East.

Mr. DeLone: May I have the question back?

(The last question was read back by the reporter.)

A. The subject was never discussed at any time by me with anyone, and what Mr. Land did with any sodium chlorate which I made available to him and for the purpose of their sale in the East, it was my expectation that it would compete with chlorate either originating with Hooker, Oldbury, or any chlorate that we might deliver to Mr. Logan, and if they did, why, that was their problem and certainly wasn't mine. I wouldn't know a thing about it.

By Mr. Freed:

Q. Did you have any understanding or any conversation with Mr. Logan with respect to competition between Penn- [fol. 1761] salt in the East and Olin in the East, and the sale of sodium chlorate furnished by Pennsalt of Washington?

A. To my recollection, the subject was never broached.

Q. And are you aware, sir, of any arrangement or understanding between Pennsalt and Olin——

A. (Interposing) I am not.

Mr. DeLone: Wait until you hear the question.

By Mr. Freed, continuing:

Q. —regarding competition between those two companies in the sale of sodium chlorate in the East?

A. I am not.

Q. Are there any facts known to you, sir, which would lead you to believe that Pennsalt and Olin were not in fact

competing in the sale of sodium chlorate in the East which had been furnished to each of those companies by your Division?

A. I have no facts.

Q. At any time between the commencement of your sodium chlorate sales discussions with Mr. Logan in 1957 and the beginning of 1960, did you participate in any discussions concerning Pennsalt and Olin competing in the sale of sodium chlorate in the East?

A. To my recollection, no. We never attended any meetings that related to the subject that you have mentioned.

[fol. 1762] Q. Then at any time between the commencement of the sales arrangement with Olin and at the time of the joint venture agreement negotiated at the beginning of 1960, were you aware of any arrangement or understanding between the two companies which would circumscribe or limit the competition between the two of them in the sales of sodium chlorate in the East?

A. No.

Q. In the selling efforts which Pennsalt and Olin each made in the East in 1958 and 1959, was the technical and other assistance, which could be afforded by Pennsalt-Washington, to be available equally to those companies?

A. Yes. Whether or not there was any unequal request was certainly—certainly I can—I think with confidence say that any reasonable request that either one of them had made, we would comply in the event the personnel would happen to be available.

I do not recall any time when either made any request for assistance that we wouldn't have provided.

As a matter of fact, I knew practically nothing about the efforts of selling the chlorate which we made available to Logan, or to Mr. Land, and with their respective depart-

[fol. 1763] ments. I felt once I had encouraged the sales to be made, that I had fulfilled the measures that I felt were necessary as an expediency while we had excess production at our Portland plant, and I didn't involve myself in the affairs of the others. I left that entirely up to them.

Q. Then as long as the sodium chlorate was being made available for sale in the East, Pennsalt-Washington was neutral with respect to who sold it, is that correct?

A. That is correct.

Q. In the limitations to which you referred at the beginning of this morning's testimony, Mr. Shanaman, as having arisen in discussions with Mr. Logan, subsequent to your first sodium chlorate sales conversation with him, was there any conversation at any time with respect to Olin's selling sodium chlorate furnished by Pennsalt outside of the Southeastern part of the United States?

A. Well, as I stated earlier, Mr. Freed, I do not have that kind of a memory which permits me to give details. I can say to you, however, that I do not recall any instance where Mr. Logan requested me to make available or asked me to—asked me a question concerning the—whether I [fol. 1764] would like to have him sell bulk sodium chlorate in tank car quantities to any industry other than the pulp and paper industry in the Southeast.

We never offered them either liquid sodium chlorate, we never offered them any packaged sodium chlorate of any kind. It never entered our discussions at any time.

The 2,000 tons which we originally discussed was in tank cars similar to the ones that we were shipping to the pulp and paper industry in the Northwest.

Q. Then the offer which you made to Mr. Logan was confined to a form and a means of delivery which were adaptable only to the uses of the pulp and paper industry at that time—is that correct, sir?

A. Principally, yes, although it is conceivable that as—maybe somebody else would run across a use for sodium chlorate unknown to us here in the West where our industry is certainly less dense than in the Eastern part of the United States, and that it might require to serve that use sodium chlorate in the same grade material and the same type of tank car.

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[fol. 1765] Cross Examination.

By Mr. DeLone:

Q. Now, there is one other subject.

Yesterday there was reference to the exclusivity of the license or immunity agreement between Pennsalt and Olin concerning the Olin Mathieson chlorine dioxide process and know-how.

I show you the agreement, the memorandum of agreement dated July 31, 1953, and ask you to read it, unless you recall it, because I think you have seen it recently, and tell me whether or not in the agreement itself you find any provision which to you connotes exclusivity?

Mr. Freed: I object to that question. The document speaks for itself.

I believe Mr. Shanaman has testified fully about his own interpretation of it previously. I don't believe the document itself is any further evidence of Mr. Shanaman's thinking than that that has been previously testified to.

Mr. Delone: For my own part, I feel the witness is entitled to look at the document and see if that is of any aid to him in recalling this transaction.

[fol. 1766] Go ahead and answer the question, if you can.

A. If the question is related to whether I find any reference to exclusivity that you mentioned, if you will just say "exclusive provision," in the contract, I would say no, I see none.

By Mr. DeLone:

Q. So far as the actual negotiation of that agreement in 1953, who negotiated the agreement with Olin Mathieson?

A. I set the stage for it. The wording was arranged by Mr. Drake, and I presume with an attorney in the Philadelphia office, and they, with Mr. Logan, apparently made the arrangements for the type of document here.

I do not even see Mr. Logan's name on the document.

Q. Were you present when Mr. Drake and Mr. Logan discussed this, assuming that they did?

A. No, I don't even know whether Mr. Logan was present when this was done.

Q. Had you originally set the stage for this?

A. Yes.

Q. Do you recall what, if anything, you said about exclusive provisions that you were seeking?

[fol. 1767] A. Well, actually the details of the contract really weren't discussed between Logan and myself. We agreed on certain broad things with regard to the purchase—sale and purchase of chlorate for an indefinite period, and Mr. Logan certainly understood that he could alter the situation any time he wanted.

Our only interest, as I expressed it to Mr. Logan, at the time, was that we did not want Olin Mathieson making arrangements with pump outfits and conveyor outfits and boiler outfits to go into pulp mills and claim that they too could install an Olin Mathieson system, since the dilution under these conditions would be so great that it would be unlikely that a pulp mill would attach very much significance to our understanding of the Olin Mathieson system to a greater degree than somebody who is only interested in making a nickel out of a particular piece of equipment.

Q. You said, I think, and I may have misunderstood you, that you had discussion with him about purchase and sale of sodium chlorate.

Did you discuss sodium chlorate—purchase and sale, or did you discuss the chlorine dioxide generating process?

[fol. 1768] A. If it was in relation to this, it was obviously a chlorine dioxide system, because that preceded the time when we were offering them chlorate.

I misunderstood your question.

Q. When in October of 1957 you negotiated with Mr. Logan the extension of the chlorine dioxide generating immunity agreement, if I may call it that for short, was the subject of exclusivity then discussed?

I am showing you the extension agreement.

A. Well, this extension agreement, as I recall, was made as a result of Mr. Logan several times during the intervening period between July, 1953 and October, 1957, requesting some alterations in our understanding of what we were going to do in representing them on—with their equipment or the process.

For example, request has been made that we alter territory. I recall that there was some reference made to Japan,

and I recall there was some reference made to Canada, and so on, which certainly gives evidence of the fact that both Mr. Logan and I seemed to have a meeting of the minds in our first understanding reached with regard to what we were going to do on behalf of Olin Mathieson and the installation of their process in the Northwest.

I think that the letter of October 7th probably more [fol. 1769] clearly identifies the understanding between Mr. Logan and myself, and I, therefore, feel that this is a reasonable statement of this particular understanding.

Redirect examination.

* * * * * * *

By Mr. Freed:

Q. Withdrawing the question and rephrasing it, can you [fol. 1770] tell us, Mr. Shanaman, whether your testimony in response to Mr. DeLone's questions today is intended by you in any way to change the substance of your testimony yesterday regarding the understanding and conversations between you and Mr. Logan regarding exclusivity?

Mr. DeLone: I object to the form of that question as an improper method of examination of any witness.

He would have to have his attention called to every word of what he said yesterday before that question could be properly answered.

By Mr. Freed:

Q. Subject to Mr. DeLone's objection, which has been placed on the record, would you state for us, Mr. Shanaman, whether your testimony today is intended by you to withdraw the testimony that you gave yesterday respecting the exclusivity of the understanding between you and Mr. Logan?

A. I think my testimony today, as far as I recall what was said, is but an amplification of what was said previously. I think it probably is an explanation of the meeting of the minds which Mr. Logan and I had, and identifies the fact that there was no reference in the original document of an exclusive feature.

Q. But apart from the mention or lack of mention of the [fol. 1771] term "exclusive" in any of the agreements, was it your understanding in your discussions with Mr. Logan that Pennsalt's right to use the Mathieson process was exclusive?

A. It was exclusive of the right of Olin Mathieson to install it, and it related specifically—our discussion at the time this original agreement was contemplated related to the Pacific Northwest, where we were going to try to make a combination of the process and the chlorates for the purpose of selling to the pulp and paper mills the chlorate and getting installation of the Olin Mathieson system.

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[fol. 1772] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 394

Philadelphia, Pennsylvania

EXCERPTS FROM PRETRIAL ORAL EXAMINATION OF ALBERT H. CLEM, TAKEN ON SEPTEMBER 28, 1961

* * * * * * *

[fol. 1773] ALBERT H. CLEM, having been duly sworn, was examined and testified as follows:

By Mr. Freed:

Q. Sir, would you state your name and home address for the record?

A. Yes, Albert H. Clem. My home address, 1130 Church Road, Wyncote, Pennsylvania.

Q. What is your present position in the Pennsalt organization?

A. Vice president of marketing.

Q. And how long have you held that position?

A. Since January 1, 1960.

Q. Prior to the beginning of 1960, what was your office in the Pennsalt organization and for how long had you held it?

A. I was general manager of the Chemicals Specialties [fol. 1774] Division from 1954 until 1960.

Q. And during the period prior to January 1, 1960, were you involved in the sale of sodium chlorate?

A. No.

Q. Were you prior to the beginning of 1960 involved in any consideration of matters relating to sodium chlorate?

A. Only as a member of the management committee meetings of which you have minutes. I sat in on those meetings.

Q. Since assuming the post of vice president-marketing, have you had occasion since the beginning of 1960 to exercise any responsibilities in connection with the sale of sodium chlorate?

A. In connection with the sale of sodium chlorate, no. I have, naturally, been on the Board of Penn-Olin and have

been on the so-called sales committee of Penn-Olin which was a two-man committee, but this was purely for the negotiation of a sales agreement between Pennsalt and Penn-Olin on sodium chlorate.

Q. In other words, your activities in respect to sodium chlorate have not included the actual sale or solicitation of sodium chlorate sales; is that correct?

A. Never.

Q. Near the conclusion of Mr. Drake's deposition this morning, reference was made to an extract from the minutes [fol. 1775] of the full Management Council Meeting No. 18 which took place in June, 1961. That document was marked as Plaintiff's Drake Exhibit 52. Reference is made in this exhibit to the presentation of data by Mr. Clem respecting the years 1955, 1959, and 1965 which were related to Pennsalt's share of the markets in various products, and one of the chemicals listed in the course of this extract is "Chlorates." Can you tell us, sir, what the nature of your report was to the full management council meeting with respect to chlorates?

A. I don't remember the numbers and I am not sure that on chlorates we charted it, but on the other products there—we probably did on chlorates, too—we developed some charts based on published projections of the growth and compared our own capacities with that and sales forecasts with that, and these are the ones we singled out as being ones where we are not keeping pace with the industry. This, of course, was just Pennsalt we are charting here, as I recall it.

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[fol. 1776] Q. Have you at any time prior to today heard about any process or production development work which Olin carried on with Vickers-Krebs relating to sodium chlorate cell development or a sodium chlorate plant?

A. I know that in the initial meeting held in New York Mr. Block was very insistent that we be sure we are using the right cell, and he mentioned the Krebs cell at that time as being worthy of a look-see. That's all I know about it.

Q. Did he mention what work or what discussions the Olin people had carried on in respect to a cell?

A. Not in any detail.

Q. Can you recall any mention at that meeting concerning efforts that Olin may have made prior thereto to entry by itself into the sodium chlorate business?

A. No.

Q. Do you recall any references during that meeting or any of the meetings you had with Olin to the possibility that Olin on its own enter or be able to enter the sodium chlorate business?

A. No, it wasn't mentioned.

Q. In any of the discussions which you had in relation to the joint venture was the question of Olin's possible entry into this business by itself ever discussed?

A. No.

[fol. 1777] Q. Was it ever discussed in any meetings of Pennsalt people only?

A. No.

Q. To your knowledge would it have made any difference in any consideration that was given by Pennsalt to this project whether Olin was or was not prepared to enter the business on its own?

Mr. DeLone: Wait. Just repeat that question, please.

(The question was read by the reporter.)

By Mr. Freed:

Q. I should have confined that: Would it have made any difference to you in your participation in these discussions or meetings?

A. Well, we would have lost a good partner but I don't see—are you trying to say—can I interrupt and see if I had the question right—are you trying to say if Olin had come out in 1959 and announced a chlorate plant in Chattanooga, let's say, would this have made any difference to us on chlorates? I am sure it would.

Q. The other part of my question is, if you had known that Olin was considering entry into this business on its own at the time you were engaged in negotiations with them, would it have made any difference in your participation in [fol. 1778] these negotiations?

A. I don't see why, actually. I don't get the trend of this question because it is a hypothetical one and——

Q. Well, it is hypothetical, sir, only in terms of your own knowledge, but you have no knowledge, as you have testified?

A. No knowledge that they were considering this on their own at all.

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[fol. 1779] Q. And have there been any discussions with respect to the sale of American Potash sodium chlorate by Penn-Olin or Pennsalt or Olin after this year?

A. No.

Q. At the meeting which you and Mr. Johns attended with American Potash was there any other discussion of the price of sodium chlorate?

A. No.

Q. Has there been any discussion since the negotiations for Penn-Olin first began of a possible increase in the price of sodium chlorate?

A. Not with five-year contracts floating around. No, there has not been.

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[fol. 1780] By Mr. Freed:

Q. Mr. Clem, I would like to show you a copy of a memorandum to the file by you dated January 25, 1960, previously marked Plaintiff's Drake Exhibit 44. In the paragraph numbered 3 on the first page the following sentence appears:

> "The possibility was suggested that Pennsalt might act as a sales agent in certain geographic areas."

[fol. 1781] I wonder if you would refresh your recollection of the meeting which is the subject of this exhibit and tell us what areas were referred to in that meeting which this particular sentence summarizes.

A. Well, I believe the word "geographic" is not particularly important to this sentence, but I think the Ag Chem people felt they might be able to move some of this tonnage, and our industrial chemical people East thought they might be able to move some of it. No specific accounts

were named at the time and it was a desire on their part to have additional material to sell.

Q. Was there any discussion at this time of the amount of sodium chlorate that Pennsalt might sell?

A. I believe we got an estimate from Drake Watson on the amount he thought would be the market potential in the agricultural chemicals that could be shipped from their plant economically and it was a relatively low number, in the 1000-ton bracket.

Q. And did you get any estimate with respect to sales by the industrial chemicals people?

A. I received no estimate from them.

Q. Does the reference to geographic areas recall anything to your mind about the area in which Pennsalt might concentrate or limit its sales effort?

[fol. 1782] A. No, no I don't recall any specific geographic area mentioned.

Q. The last line of your memorandum makes reference to matters of policy to be resolved between Messrs. Drake and Block. Do you remember what that discussion related to?

A. I believe it related to questions as to whether Penn-Olin was going to be a company per se with its own employees, et cetera, et cetera, or whether it was primarily formed as a company but Pennsalt would use its own employees and Olin its own existing sales people to carry out the functions of the Penn-Olin Company. This was a decision that had to be reached between Mr. Block and Mr. Drake as to how Penn-Olin was to operate.

Q. And ultimately was that question resolved by choosing the latter alternative?

A. Yes.

* * * * * * *

[fol. 1783] By Mr. Freed:

Q. Mr. Clem, how would the reciprocity issue which we discussed earlier be applied by Pennsalt in connection with a joint venture?

A. To the best of my knowledge, it has not been applied

on Penn-Olin. The actual application of trade relations on construction materials is not a very easy one to apply.

Q. How about with respect to the purchase of raw materials or supplies used in production by a joint venture?

Mr. DeLone: Now, do you want to know whether it has been applied?

Mr. Freed: I would like to know how it would be applied.

Mr. DeLone: Well, he said it hasn't been.

The Witness: It hasn't to my knowledge in this venture.

. . . . . .

[fol. 1784] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 396

Washington, D. C.

EXCERPTS FROM DEPOSITION OF WILLIAM COOPER WILLITS
TAKEN ON AUGUST 3, 1961

* * * * * * *

[fol. 1785] WILLIAM COOPER WILLITS was called for examination for the plaintiff the United States of America and, having been first duly sworn by the Notary, was examined and testified as follows:

EXAMINATION ON BEHALF OF THE PLAINTIFF THE UNITED STATES OF AMERICA

By Mr. Copley:

Q. Would you state your name and address for the record, sir?

A. William Cooper Willits, W-i-l-l-i-t-s.

Q. Are you presently employed by Pennsalt Chemical Corporation?

A. Yes, sir.

Q. Would you state what your present position with Pennsalt is?

A. Treasurer.

Q. What in a brief and general way are the responsibilities and duties of the Treasurer of Pennsalt?

A. The Treasurer for Pennsalt is the chief financial officer of the corporation. He is responsible for the cash management. He is responsible for the accounting function. He is responsible for the progress in planning and responsible for budgets.

Q. How long—I'm sorry, sir.

[fol. 1786] A. And any related area. An area which is not related is office management.

Q. How long have you held this position?

A. Since November of 1957.

Q. Prior to November 1957 what was your position with Pennsalt?

A. I was Assistant to the President.

Q. For how many years did you hold that?

A. One year.

Q. During that time you would have been Assistant to Mr. Drake?

A. Yes.

Q. What were your responsibilities in that position?

A. That position essentially was an administrative assistant to the President who, from time to time, was assigned special duties of the President and acted largely in all areas in which the President was interested. It's purely a staff job. In other words, I had no responsibilities other than those assigned by the President.

Q. Are you saying then that there was no decision-making function to that job other than those specifically delegated by the President?

A. That is right.

* * * * * * *

[fol. 1787] By Mr. Copley:

Q. Does Pennsalt consider, or did Pennsalt consider that its $100,000 was its capital contribution to Penn-Olin?

Mr. DeLone: That its $100,000—to what $100,000 do you make reference?

Mr. Copley: I should amend my question to state $1 million. I am referring to the figure $1 million that appears in the letter agreement, Plaintiff's Willits Exhibit No. 1.

The Witness: The letter agreement provides for an investment on the part of each company of $1 million either in capital stock and/or subordinated notes.

As I previous -- stated, it was subsequently determined that this investment must be increased to a million and a half on the part of each parent in either/or common stock and subordinated notes, the reason being that there was the minimum amount that any lender would accept as adequate [fol. 1788] equity to loan money to the Penn-Olin Chemical Company without guarantee on the part of the parents.

My answer to the question first is, initially, yes, they considered $1 million, but as the project developed they determined it would have to be a million and a half dollars.

By Mr. Copley:

Q. Then one million and a half dollars became Pennsalt's capital contribution to Penn-Olin?

A. That was anticipated to be their capital contribution.

Q. What has their capital contribution been to date? Just approximately.

A. As I recall the last balance sheet, it was in excess of $2 million.

Q. Is there a mechanical procedure for issuing stock in Penn-Olin Chemical Company? If so, would you describe it, please?

A. The procedure was that shares of stock would be issued to each company with a par value of one dollar and a stated value of $1,000 as called for by the treasurer, supported by expenditures. In other words, to cover expenditures for construction of the plant.

Q. Is that the procedure under which the company has been operating to date?

[fol. 1789] A. Actually in essence it is the procedure with the exception that the stock has not been issued other than the initial one share to each company.

Q. Of the approximately $2 million which Pennsalt has invested in Penn-Olin, how much of that money was in payment of stock?

A. As I previously stated, only one share has been issued, so factually only $1,000, but in terms of our attitude towards it, it would be an equivalent number of shares based on that ratio, a share of stock per $1,000 of investment.

Q. Is it then Pennsalt's attitude that all of the shares of stock have been paid for?

A. Mr. Copley, the problem here, as I'm sure you can appreciate, as soon as Penn-Olin was faced with this suit it was impossible to achieve financing on this basis which Pennsalt demanded. In other words, that the debt not be secured. I think you can appreciate a banker is not going

to loan money to a company that has an anti-trust suit on its hands.

Now to get back to your question, is it anticipated that shares will be issued for this investment which is now in excess of $2 million, my answer is "no".

Q. That is your attitude at this time?

A. Yes, sir.

[fol. 1790] Q. Why is that your attitude at this time?

A. Our fundamental basis in going into this project was to limit the amount of capital invested to the highest degree possible. As you have already developed it; we initially were thinking in terms of a million dollars. It then became necessary to increase it to a million and a half and to achieve financing on the basis which was previously stated. We are sure, or we are reasonably sure that that can be achieved once this suit is released.

Q. Are you speaking of the outside financing?

A. Yes.

Q. If we may concern ourselves solely with internal financing, I will ask you the question why was not the stock issued?

A. Oh, there is nothing peculiar about the lack of issuance of the stock. The one share was issued to each company at the time of incorporation. The next call for stock, my recollection is, was in November of last year or October of last year, October or November of 1960. I can't pinpoint the first date. As I think you can appreciate during this period these various agreements were being drawn up. One area where there was some discussion was the transfer of land, land owned by Pennsalt within Pennsalt's plant at Calvert City, Kentucky, to Penn-Olin on which Penn-Olin was going to construct a plant. The difference of opinion [fol. 1791] was a very small one, it was purely related to means of ingress, egress and the reservation of additional land should it be necessary.

Q. When did the dispute about the land arise?

A. I didn't say it was a dispute, I said it was a disagreement. It occurred, I believe, sometime in the fall. It was just a question of the size of space to be allocated. I don't know for a fact but I suspect a logical move on the part of

our partner was, well, let's get this settled before we issue any more stock. The issuance of the stock was originated, as normally, by the secretary of Penn-Olin. It neither disturbed us or disturbed Olin because we were satisfied that this would be worked out and I believe it has since been worked out, I don't know as a matter of fact, so the stock wasn't issued. Capital was paid in without the stock being issued, that was all.

Then it became more and more academic because we couldn't get financing. We knew that in the interim and just put our own money into the situation.

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[fol. 1792] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 397

Philadelphia, Pa.

EXCERPTS FROM ORAL DEPOSITION OF GEORGE T. COLLINS, TAKEN SEPTEMBER 27, 1961

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[fol. 1793] GEORGE T. COLLINS, having been duly sworn, was examined and testified as follows:

By Mr. Freed:

Q. Mr. Collins, what is your position with Pennsalt?

A. I am manager of the International Division.

Q. And what was the postion you held before your present one?

A. Assistant to the president.

Q. Perhaps for the record I should ask you if you would state your full name and home address.

A. George T. Collins, 413 Miller's Lane, Wynnewood, Pennsylvania.

Q. From when to when were you assistant to the president?

A. Well, let's see. I got into my present job in September, [fol. 1794] 1956. When I became assistant to the president, let me think.

Do you remember when Mr. Beitzel became president?

Mr. DeLone: I think that's the same time Mr. Drake became executive vice-president, and that is February of 1955, if that is what we are talking about.

The Witness: Oh, no. Beitzel was president for three or four years.

Mr. DeLone: I am sorry.

The Witness: Drake was president for——

Mr. DeLone: Drake became president in 1955.

The Witness: So it must have been about four years before that, so it would be '51 or '52. I'd say in there.

By Mr. Freed:

Q. So from 1951 to 1956 you were assistant to the president and that term of office included the time when both Mr. Drake and his predecessor were president?

A. Yes, yes.

Q. During the time that you were assistant to the president, what was the extent of your responsibilities or duties concerning sodium chlorate?

. . . . . .

[fol. 1795] The Witness: Well, one of the functions of my job as assistant to the president was to periodically prepare what you would call technical and economic evaluations of investment possibilities; and in that period of time, on several occasions, we considered and reconsidered the possibility of a sodium chlorate plant in the eastern part of the United States.

So that there were several times, I would say, during the period when I was assistant to the president, that I put together such studies, which meant collecting information from within the company, just to assemble it in one place where the president and the management could look at the figures on return on investment.

By Mr. Freed:

Q. Do you recall when it was that you first had any [fol. 1796] conversations with personnel from Olin Mathieson concerning sodium chlorate?

A. Yes. There was a meeting—I don't know, I can't give you the exact time. It was in the fall of '56.

Q. Can you tell us where that meeting took place?

A. At the Philadelphia Airport.

Q. And how did it come about?

A. I don't recall whether I was asked by Mr. Land or Mr. Grogan to attend this meeting, but it was at the request of either one of those gentlemen.

Q. And with whom did you meet?

A. Mr. Logan and Mr. Grogan, George Grogan.

Q. Prior to the meeting, what instructions were given to you by Mr. Grogan or Mr. Land concerning the purpose of the meeting and your presence there?

A. The reason I was asked to attend was because I had previously put together figures on sodium chlorate, and my purpose there was to review our findings as far as the profitableness or the return on investment on the sodium-chlorate type operation.

Q. Can you describe for us the discussion and the course of events that went on at this meeting with Mr. Logan and Mr. Grogan?

A. Essentially, it involved a discussion of what our ex-
[fol. 1797] perience had been in looking at this type of investment, namely, that it was a very-low-rate-of-return type project. Therefore, we had looked at it a number of different times in the course of years. We had never been able to justify it as an investment for the company to make.

As I recall, Mr. Logan confirmed that this was also their experience—sodium chlorate was a very-poor-rate-of-return project.

There was also a discussion then of the possibility that at one of their plants (I believe it was Lake Charles, if I remember correctly) conceivably they would have excess power, excess steam, services, et cetera, where such a unit could be put in—not on a grand scale like you would if you were starting from scratch and building a new plant, but sort of a makeshift-type operation, making use of excess steam and power which presumably could be made available at low cost; and perhaps this combination, this situation, could result in their being able to produce this at a lower cost figure and a lower investment figure than the situation that we had each looked at individually in terms of a new site and a brand-new plant.

It was left that he would investigate the further possibility. This was essentially the discussion or the gist of the discussion that we had.

[fol. 1798] Q. The meeting concluded with Mr. Logan undertaking to take another look at Lake Charles?

A. On the possibility of this makeshift-type plant, making use of the plant there.

Q. You made reference to the fact that Olin had other facilities at Lake Charles, whereas the sites which each company had looked at before had been new sites; is that correct?

A. Well, by other facilities I meant excess power, excess steam beyond their needs at that location.

Whereas, for example, Calvert City, the site that we normally looked at in our studies would involve increasing or adding steam facilities, et cetera.

* * * * * * *

[fol. 1799] Q. Do you recall at that time what the best return on investment projected by Pennsalt was?

A. Our return figure was around 6 per cent.

Q. And was that before or after taxes?

A. That was before taxes.

Q. And what had Mr. Logan's findings been?

A. I can't recall the exact number, but it was in the same order of magnitude.

Q. As at the date of this meeting, what was the size plant that Pennsalt had figured on?

A. 12,000 tons.

Q. And did Mr. Logan mention what size plant Olin had been thinking in terms of?

A. I don't recall.

Q. Was it approximately the same?

A. I think they were a comparable type, yes.

Q. How did the meeting end? What took place next?

A. Well, as I mentioned previously, Mr. Logan was going to investigate the possibility of putting in this makeshift-type unit at their Lake Charles plant.

Q. And was Pennsalt to participate in the investigation of that plant or in the possible financing of it?

A. There was no discussion I recall—first of all, there was no discussion——

[fol. 1800] You mean participation in the study?

Q. Participation either in the study or in any project that might eventuate from the study.

A. There was no discussion, as I recall, participation in the study.

I think the original meeting was to consider whether there was a possibility of doing anything jointly; but certainly we had no intention of doing it ourselves with this poor return; but there was no discussion of financing.

Q. Was Mr. Logan to report back to you?

A. Yes—not to me. He was to report back. I don't know whom he reported back to ultimately.

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[fol. 1801] Q. Did you ever follow up or learn in any way what became of the discussions and the plans that had been discussed in your meeting with Mr. Logan?

A. I just recall—I can't even say if he told me or how I learned of it—that the specific thing we talked about was makeshift. The thing was not feasible.

Why, I don't know the details.

Q. When you refer to a makeshift arrangement are you referring to something different than the building of a plant adjacent to an existing plant?

A. Yes. This would involve using an existing building, perhaps, putting as many cells as you could get into that particular building; or it involved using the incremental or excess steam or power, and this is what I mean by makeshift versus going out and building a brand-new building with all the attendant services that are required to operate it.

This was to try to fit it in, as you best might, into an existing unit.

Q. Can you tell us, if you know, why it was that Olin needed or wanted Pennsalt or Pennsalt's interest in undertaking to explore a sodium-chlorate plant at Lake Charles? What would Pennsalt's contribution or role in such a plant be?

[fol. 1802] Mr. DeLone: Would you repeat that question to me, please?

(The reporter read the pending question as follows:

"Q. Can you tell us, if you know, why it was that Olin needed or wanted Pennsalt or Pennsalt's interest in undertaking to explore a sodium-chlorate plant at Lake Charles? What would Pennsalt's contribution or role in such a plant be?")

Mr. DeLone: Do you mean as communicated to him by Mr. Logan?

Mr. Freed: Yes.

Mr. DeLone: At this meeting?

Mr. Freed: Yes.

The Witness: There wasn't any preconceived idea on this at all. This was merely something that came up as a suggestion in our conversation.

In other words, we didn't go to this meeting to promote or look at a makeshift operation.

As far as I know, neither did they come to the meeting with this idea in mind. This is something that popped up in the discussion.

By Mr. Freed:

Q. As I understand your testimony, the concern of both [fol. 1803] companies prior to this meeting was with the factor of return on investment in an eastern sodium-chlorate plant; is that correct?

A. You say that this was the purpose of the meeting?

Q. As I understand your testimony, the exchange of views which took place at this meeting indicated that both Pennsalt and Olin had found, in their individual consideration of an eastern sodium-chlorate plant, that the return on investment was poor; is that correct?

A. That's right.

Q. Was that the common ground on which the meeting was held, at which the discussions took place?

A. I would say yes, certainly. It was common ground in that we had both made these studies and both found it to be a poor investment.

Q. Was the purpose of the meeting to see whether some kind of joint venture could overcome the poor return on investment that each company had ascertained or projected individually?

A. This was certainly a consideration, yes, sir.

. . . . . .

[fol. 1804] By Mr. Freed:

Q. On the basis of Mr. DeLone's statement, can you tell us what change in the return-on-investment outlook was contemplated or hoped for as a result of the matters discussed at your meeting?

A. I don't recall any specific discussion on that point. Anything dealing with the evaluation of investments, no, sir.

However, and we always—we are not always, but in many cases, we have always looked at the possibility of doing projects jointly, using borrowed money, because that would increase the rate of return on the equity. This is a standard, [fol. 1805] normal consideration.

Now, if you should borrow the money yourself this goes on your balance sheet and you are reporting to your shareowners that you have a full investment.

. . . . . .

[fol. 1806] Q. Was there any discussion at the meeting with Mr. Logan and Mr. Grogan of a joint venture?

A. I would say, well, certainly, the idea of the meeting was to exchange information on how we could put together a sodium-chlorate plant, what we thought of such an investment, with the thought in mind that perhaps there was some basic that together, if we did go together, this could be more profitable for both of us.

There was no preconceived idea as to how this could be [fol. 1807] accomplished, what our participation might be, or what their participation might be, or what have you.

Q. The document to which you referred earlier and which was discussed during the course of Mr. Grogan's deposition yesterday is a memorandum from Mr. Land to Mr. Drake dated December 27, 1956, and was previously identified as Plaintiff's Drake Exhibit 13.

I show you a copy of this document, one sentence of which is underlined, and ask you if you would examine it in its entirety and state whether it adds anything to the testimony you have already given as to the matters discussed or the nature of the matters discussed at the meeting.

. . . . . .

[fol. 1808] The Witness: I would say no.

By Mr. Freed:

Q. There is a reference in this sentence as follows:

"... that their cost figures, both capital and manufacturing, were surprisingly close to ours."

Do you recall the manner in which you and Mr. Grogan and Mr. Logan compared the finding that each company had made individually prior to the meeting on the subject matter of costs?

A. We each stated what our estimated investment figure would be for such a plant and we each stated what our manufacturing costs would be, based on assumed power costs and bulk costs, which were the major factor of costs in chlorate.

Q. Do you recall whether each company furnished the other with any particular documents relating to prior studies?

A. No. As far as I know, there was no exchange of documents.

Q. The exchange of information was entirely oral?

A. Yes.

Q. Was there any discussion at this meeting of the mar-[fol. 1809] ket or markets to be served by a sodium-chlorate plant in the East?

A. None that I can recall.

Q. Was there any——

A. Other than the fact of our own forecast, our own estimate, based on figures which our Sales Department thought they could sell.

Q. Was there any discussion of the states or areas in which the sodium chlorate that had been considered by either company prior to the meeting would be sold? Did you exchange information on the subject——

A. No.

Q. —of where the market was?

A. No.

Q. Was there any discussion of exploring the possibility of a plant that would manufacture something other than sodium chlorate?

A. No.

Q. Other than the question of costs and return on in-

vestment, were there any other elements of entry into the sodium-chlorate business that were discussed in the meeting?

A. (No response.)

Q. Was it completely a financial discussion of elements of cost or——

A. Completely a discussion of the elements of cost.

. . . . . .

[fol. 1810] By Mr. Freed:

Q. Did he say anything about Olin's efforts to develop production technology?

A. None that I can recall.

Q. Did he say anything about Olin's chlorine-dioxide process?

A. No. This was not part of the discussion at all.

[fol. 1811] Q. Did he say anything about why Olin was interested in entering this business?

A. I don't know that he specifically stated this, but it would be obvious to anybody who knew their particular situation, which everybody knew—that they had chlorine dioxide and chlorate was an ingredient or a product which was used to make the chlorine dioxide.

Also they are in the soda business, chlorine and caustic, so this would be a perfectly logical thing for them to continue.

. . . . . .

[fol. 1812] Q. Do you recall the amount or the approximate amount of the capital-cost figures that were discussed at your meeting?

A. Within the range of $4,000,000 to $5,000,000.

Q. And that was the same for both companies, as you recall the discussion?

A. Yes. Our figures were quite close.

. . . . . .

[fol. 1813] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 398

Wilmington, Delaware.

EXCERPTS FROM DEPOSITION OF JAMES MCWHIRTER, TAKEN ON MAY 12, 1961

* * * * * * * *

[fol. 1814] JAMES MCWHIRTER, a witness called by the plaintiff, being first duly sworn, testified as follows:

Direct examination.

By Mr. Freed:

Q. Are you an employee of Pennsalt Chemicals Corporation?

A. I am.

Q. Would you tell us what your present position with that company is?

A. General Manager, Industrial Division, East.

Q. How long have you held the position of General Manager?

A. Since January of 1960.

[fol. 1815] Q. Would you summarize for the record your prior history with Pennsalt?

A. With Pennsalt?

Q. Yes, sir.

A. I came to work for Pennsalt in July of 1945, with the intention of becoming plant manager at the Natrona, Pennsylvania plant; spent about six months in the central office in Philadelphia to became familiar with company policies, procedures, and so forth, transferred to Natrona on January 1, 1946. I served as plant manager there for several years.

In 1948, about January of 1948, we were assigned the responsibility of coordinating all activities in construction of a plant at our Calvert City, Kentucky, site. When the plant was completed we started operations in July, 1949. I then became plant manager of the plant at Calvert.

About 1951, I was assigned the responsibility of area manager of the south and southeastern plants.

In September, 1952, I was transferred to Wyandotte as plant manager.

Early in 1955, I was transferred to Philadelphia as manager of manufacturing.

In August of 1958, I was assigned the responsibility of personnel director for the entire corporation.

In January, 1960, I became General Manager of Industrial [fol. 1816] Division, East.

I also serve as a member of the Pension Administrative Committee, also a trustee of the Pennsalt Foundation which handles the corporate donations and contributions and administers this program.

Q. Sir, would you now state for the record your present affiliation with the Penn-Olin Chemical Company?

A. President of Penn-Olin Chemical Company.

Q. How long have you held that office?

A. I was assigned the responsibility back on February 11 or 12—I forget the exact date—when there was a meeting between the two companies and they decided to enter this venture.

Mr. DeLone: What year?

The Witness: I think officially I was probably not President until the directors' meeting which came sometime later. But our President of Pennsalt assigned me to this position, after agreement with the Olin people, and this was ratified at a subsequent directors' meeting.

By Mr. Freed:

Q. And that was in 1960?

A. 1960.

. . . . . .

[fol. 1817] By Mr. Freed:

Q. Mr. McWhirter, do you know when sales for the account of Penn-Olin Chemical Company were first solicited?

A. Effective January 1, 1961, for the account of Penn-Olin.

Q. I direct your attention to the word "solicited," and will ask again whether you know when Penn-Olin, or anyone acting on its behalf, first solicited business, sodium chlorate business, on behalf of Penn-Olin?

A. For Penn-Olin, it does not become effective until January 1, and any solicitation or cultivating customers and so forth, I have no way of knowing that.

Q. The responsibility for sales by Penn-Olin belongs to Olin Mathieson; is that correct?

[fol. 1818] A. That is correct.

Q. Does Olin Mathieson report to you or does any Olin representative in Penn-Olin Chemical Company report to you on the progress of sales?

A. The provisions were that when the Penn-Olin plant is in operation, Penn-Olin will give a complete accounting, back, of the sales.

Mr. DeLone: Penn-Olin?

A. (continued) Olin would give a complete accounting of the sales back.

By Mr. Freed:

* * * * * * *

Q. Who is in charge of sales for Penn-Olin Chemical Company?

A. Mr. Johns is directly in charge. He works for Mr. Logan, Vice-President, obviously, but Mr. Johns' primary responsibility is sales.

Q. Has Penn-Olin made any sales as of this date?

A. For the account of Penn-Olin sales have been made.

Q. And when were the first sales made for the account of Penn-Olin?

A. I can't tell you this date, sometime in the first quarter [fol. 1819] of this year. They have already sold material that will be for the account of Penn-Olin.

Mr. DeLone: What do you mean when you say "they"?

A. (continued) Olin has made sales for the account of Penn-Olin.

* * * * * * *

[fol. 1820] By Mr. Freed:

Q. Mr. McWhirter, what was the return on investment predicted for a Calvert City sodium chlorate operation prior to Pennsalt's embarking on a joint venture with Olin-Mathieson?

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[fol. 1821] A. Generally speaking, it is pretty obvious from all of these studies that the rate of return was uniformly low. You would say that there was some optimistic and there were some on the low side. My recollection is that it was between 12 and 15 per cent. To get anything like a 19 or 20 per cent return, as we are talking about in the Penn-Olin venture here, you have to deal with substantially greater volume plants. Our sales people were never of the opinion that they could market anything like 25,000 tons of chlorate per year.

And finally this is one of the major factors that makes this Penn-Olin venture look good. It is the volume of operation.

By Mr. Freed:

Q. Mr. McWhirter, would you tell us what the difficulty [fol. 1822] was that Pennsalt anticipated in selling sodium chlorate in the east on its own?

A. Primarily that we have a very, very meager sales force in the south, southeast, to begin with; and, two, we don't have any strength in the pulp and paper industry in the southeast.

Q. How meager is your sales force in the southeast? Would you describe your sales force in terms of size and basis of operation in the southeast?

A. I told you about the original sales force, that we had something like I think 115 or 120 people total, of which maybe 45 to 50 were engaged in direct selling, and product managers, and so forth, technical service.

The south has not been a particularly profitable area from our standpoint. As a matter of fact, we did not have an office but we had a man who used his home as an office in the area. Within the past six months we have shared

an office with a specialty division at Atlanta. We had about two people out there, Industrial Division.

The sales manager, the regional sales manager, died two weeks ago, and he is the only person who had any contacts whatsoever, and we were very meager even before this in the southeast.

Consequently we did not and do not visualize any success [fol. 1823] in trying to move 25,000 tons, or anything like this, into the pulp and paper industry.

Q. Did Pennsalt make any efforts to cultivate the southeastern market since you have been with the company, in any products now?

A. Yes, but to answer your question I think we must recognize that the products we would be selling to the pulp and paper are chlorine, caustic, and so forth, and that with the location of our plants does not make us competitive with people who have plants in Mississippi and Louisiana, and so forth. Consequently, we have not had any appreciable sales force in the south and southeast.

Q. Is the Calvert City plant of Pennsalt not well located for the pulp and paper industry of the southeast?

A. This is true.

Q. It is not well located?

A. It is not well located for this purpose at all.

Q. Is it well located as a base of operations for a sodium chlorate plant?

A. Not as favorably located as our competitors' plants.

Q. Why was it chosen?

A. For other factors. We have power there, cheap power. We already had some off-site facilities, pumping stations. We could minimize the capital investment required, and we [fol. 1824] had work forces and supervision, so that we could make available necessary help, but it was not selected solely for location, believe me.

Q. Were there any other sites that you considered in the southeast that would have been more desirable from a marketing point of view?

A. I believe I saw mentioned in the files that we had looked at Brunswick in Georgia at one time.

Q. Why was Brunswick rejected?

A. I believe the power costs were excessive.

Q. Was any estimate made of the relationship between high power costs and better location at Brunswick?

A. I am sure that complete studies were run and a decision was that we did not want to build in the area at that time.

Q. Then from the point of view of Pennsalt Chemicals Corporation, Calvert City was the best location available?

A. This is correct, considering capital investment and operating costs and all other factors.

Q. Has any effort been made to sell the chlorine and caustic output of the Calvert City plant to the southeast?

A. No intensive effort has been made in the past. We are making more of an effort now. This is why we opened a regional office out there and have this one sales manager whom I mentioned has been deceased a month or so ago. [fol. 1825] But we are not at all strong sales-wise in the south or southeast.

Q. Do you have present plans to expand your sales force for caustic soda and chlorine to paper companies from Calvert City?

A. We would hope to do this—not necessarily from Calvert City, but we would hope to get an entree so we could sell chlorine to the pulp and paper industry in the southeast.

Q. How do you propose to establish that entree?

A. Just by getting more people in the field and trying to develop our technical service to the point where the people are recognized by the industry and by the trade.

Q. And is your division of Pennsalt presently engaged in making such effort?

A. We are recruiting personnel for this purpose.

Q. And it is your purpose to expand the sales of these two chemicals to the southeastern pulp and paper companies?

A. That is right.

Q. Can you tell us why Pennsalt's plans in this regard, with regard to chlorine and caustic soda, do not also permit it to make sales of sodium chlorate?

A. We would have the same problem except in spades. We do have people in the Industrial Division East who are familiar with chlorine and all the technical aspects of it.

[fol. 1826] To try to get into the pulp and paper with chlorate we have absolutely nothing to offer, no technical service people; we have nothing we can offer that our competitors cannot offer to a greater degree.

Q. Does Pennsalt Chemicals Corporation have as much know-how in the field of sodium chlorate as it does in the field of caustic and chlorine?

A. The answer would be no, not as much of it.

Q. What are the facilities that you have for marketing sodium chlorate in the west from your Portland plant?

A. You say facilities?

Q. What are the selling facilities?

A. We have several exceedingly competent technical service people out there who have been of major assistance in getting entree into the pulp and paper mills, and I would say this is the largest single factor.

Q. And is the technology and experience that those people have on the West Coast capable of being transferred or taught to the sales force of Pennsalt in the east?

A. The answer to that has to be yes, with time.

Q. Is there a difference in the problem of expanding the marketing of chlorine and caustic soda in the southeast and of marketing sodium chlorate in the southeast for Pennsalt?

A. Yes.

[fol. 1827] Q. Would you tell us what that difference is?

A. Our people in the east have been marketing chlorine for many, many years. They are trained in all phases of chlorine manufacture, application and use. They are familiar with containers. They can give good technical service in chlorine.

Q. When you say "our people" do you mean that there are existing personnel who in Pennsalt —

A. Do this type of work?

Q. —who will form the sales force in the southeast for selling chlorine and caustic soda, or will there be a new sales force recruited for that purpose?

A. We will get additional personnel. They will not be assigned specifically to this area, but we will bring more people into the technical service group to support and back up the field salesmen.

Q. Is there any reason why the know-how of the sales

force on the West Coast cannot also be brought to this area for the same purpose?

A. Except for the fact that you can't scatter two people over the whole United States. Equally important with the technical knowledge and know-how is the acceptance and recognition in the industry, and you don't acquire this overnight.

. . . . . .

[fol. 1828] By Mr. Freed:

Q. It is my understanding that prior to the Penn-Olin venture, Pennsalt contemplated at one time a sodium chlorate operation at Calvert City in the range of 10 to 15,000 tons per year. This venture and several other proposals like it were rejected. Is that true?

A. That is true.

Q. I would like to know whether the rejection of the various Pennsalt proposals, Pennsalt without a partner, was predicated on the belief that Pennsalt could not make a profit on a Calvert City sodium chlorate operation?

A. It was predicated on the conclusion that we could not get the return on our investment established by our guide rules. There is a difference there from profit.

Q. Can you explain for the record the difference between the return on investment and the profit from a venture?

A. You may get a profit from the venture and still not be interested in it because the profit might be equivalent to 2% of the total capital invested. This does not meet our requirements so I don't believe Pennsalt ever concluded that they couldn't get any kind of a return on their investment. They could not get an adequate return by their [fol. 1829] standards.

Q. Is it correct, then, to say, dealing exclusively with profit, that Pennsalt made no determination that it could not profitably sell sodium chlorate at Calvert City; would that be correct, dealing only with profitable sales?

A. What is your definition of "profitable sales"?

Q. Let's define it, for the purposes of this question, that profit is a return greater than the cost of sales.

A. We did not determine this.

Q. You did not determine that that would be impossible?

A. I will supplement this by adding at the present time we feel the break-even point, which I think you are referring to now, where the income is equal to the expenditures, requires operation at about 14,500 tons per year.

Q. And would you explain what you mean by a break-even point of 14,500 tons per year?

A. Yes. It is the same frame of reference as your explanation of profit meant where the income revenue exceeded the expenditures.

[fol. 1830] Q. Are you stating, sir, that if a plant was constructed for the purpose of selling less than 14,500 tons per year that that plant could not operate at a profit?

A. I am saying this chlorate plant that we are building cannot operate profitably under a level of 14,500 tons per year.

Q. You are now referring to the Penn-Olin plant which is under construction?

A. That is, not with the investment we have in this particular plant.

Q. I would like to return your attention to the plant contemplated by Pennsalt when it was investigating the possibilities of manufacturing sodium chlorate by itself at Calvert City. My question is Did Pennsalt determine that it was unable to construct a plant that would operate profitably at Calvert City to manufacture sodium chlorate?

A. It did not determine that it could not operate profitably in the sense that you have defined "profitably".

Q. Did it determine that it could not receive any return on investment?

A. If it received a return then it is operating, by your definition, profitably.

Q. Then our definitions are merging.

Then to return to a statement you made this morning, [fol. 1831] would it be correct to say that Pennsalt determined that the best it could do on its own was to receive a return on investment in the range of 10 to 15 per cent, but no greater? Would that be correct?

A. Based on the plants that were under discussion at that time.

Mr. DeLone: Now we are talking about a before-tax return?

The Witness: I am.

Mr. DeLone: Are we, in that 10 or 15 per cent?

By Mr. Freed:

Q. I assume that all of the return upon investment figures that we have been discussing today are return on investment before taxes?

A. That is correct.

Q. So we are using the same base throughout?

A. That is correct.

Q. Now, directing your attention to the second obstacle to Pennsalt's venture on its own, namely, financing the plant, securing the money, did Pennsalt make any effort to secure financing, to secure money, from a bank or other lending institution for the purpose of a lone venture?

Mr. DeLone: I think there has been some misunderstanding and I object to the question if you are construing his [fol. 1832] earlier testimony as testimony that Pennsalt said it could not get a loan, because I did not understand the witness to have ever so testified.

By Mr. Freed:

Q. Mr. McWhirter, will you state whether Pennsalt ever made efforts to borrow money from a bank or other lending institution for the purpose of financing a sodium chlorate plant at Calvert City?

A. Not to the best of my knowledge.

* * * * * * *

[fol. 1833] Q. And would you say that the statement that Pennsalt enjoys a unique combination of assets which would facilitate entry into the sodium chlorate business, is that a true statement or a false statement?

A. I don't think it is black and white. I do think we have the technology and know-how. If you are talking about a limited ton-age, and if the return on investment could be realized from a limited ton-age, let's say 10,000 a year, I think we would enjoy these unique assets. This is all qualitative, nothing quantitative about these here.

Q. Do you know whether these particular statements

formed the basis for Pennsalt's rejection of a sodium chlorate venture in 1957, whether these particular statements were considered by the management of the company to be erroneous and misleading?

A. I am sure they were not substantiated by the projected return on investment; otherwise we would have been in chlorates.

. . . . . .

[fol. 1834] Cross-examination.

By Mr. DeLone:

. . . . . .

[fol. 1835] Q. With reference to the sales of sodium chlorate there was some reference to assuming that within a year you could assemble a sales force to sell sodium chlorate in the southeast, then how long would it take to really get going? Can you give us any estimate of how long it will take to assemble and train a sales force before the sales effort really begins—before a sales effort could begin on sodium chlorate?

A. Well, to begin with, I think it is going to take us six [fol. 1836] months to a year to recruit the type of people we will need for this job, and then the subsequent training, technological period, and so forth, is going to be at least another two to three years; and before we get our feet in the door, get admitted to the pulp and paper mills, you are talking about somewhere between five and ten years. For pulp and paper a minimum of five.

. . . . . .

[fol. 1837] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 399

Philadelphia, Pa.

EXCERPTS FROM PRETRIAL ORAL EXAMINATION OF GEORGE DAVIDSON GROGAN ON TUESDAY, SEPTEMBER 26, 1961

* * * * * * *

[fol. 1838] GEORGE DAVIDSON GROGAN, having been duly sworn, was examined and testified as follows:

By Mr. Freed:

Q. Mr. Grogan, would you state your name and home address for the record?

A. George Davidson Grogan, 46 Steeplechase Road, Devon, Pennsylvania.

Q. And what is your position with the defendant, Pennsalt Chemicals Corporation?

A. I am the general sales manager in the Industrial Division, Industrial Chemicals Division.

(Discussion off the record.)

By Mr. Freed:

Q. How long have you held the position of general sales [fol. 1839] manager?

A. Oh, I guess two years.

Q. And prior to that time, what was your position?

A. Manager of chemical sales.

Q. And for how long did you hold that position?

A. Well, I don't recall exactly, I guess maybe a couple years.

Q. Can you distinguish for us the two positions of manager, chemical sales and general sales manager?

A. Distinguish between them?

Q. In terms of the duties, responsibilities that you had.

A. Well, briefly, as manager of chemical sales, I had charge solely of the field sales group, that is to say, the regional managers and the salesmen. As general sales

manager, I have charge not only of those but a group, a couple of—two other sales managers and two product managers and, oh, product-development groups.

. . . . . .

[fol. 1840] Q. Mr. Grogan, when was the first time that you had any conversations with representatives of Olin Mathieson on the subject of sodium chlorate?

A. I don't remember the date.

Q. Do you remember the circumstances?

A. Not too well. I can't remember where it happened or [fol. 1841] anything else. I remember that I did, but——

Q. Can you recall the person or persons with whom you spoke?

A. John Logan.

Q. And can you recall what the occasion of your conversation was?

A. What the occasion?

Q. Can you recall what caused the conversation?

A. No, I don't.

Q. Can you recall what the conversation was?

A. Well, in a general sort of way. It was whether they would have any interest in putting up a sodium-chlorate plant with us. We couldn't—apparently couldn't make the thing pay ourselves and would they be interested at all in it?

Q. And what was Mr. Logan's response?

A. This is again from a faulty memory but as I recall, his comments were that they had considered sodium chlorate several times themselves and they had had the same problem, that they just—it just didn't look like too attractive a proposition by themselves, so he thought there might be some basis of our putting up a plant together.

Q. Do you recall Mr. Logan giving any reasons why Olin did not view the sodium-chlorate project as attractive by itself?

A. Well, I guess it was the same, I imagine. I don't re- [fol. 1842] call him stating it specifically, but I imagine it would be the same reason that we had had trouble with it, the return on the investment was just—wasn't too satisfactory.

. . . . . .

[fol. 1843] By Mr. Freed:

Q. You have stated, I believe, sir, that you continually harped on the subject of Pennsalt selling sodium chlorate but that Pennsalt did not put up a plant and my question is, can you tell us the reasons, if any, which were made known to you why Pennsalt itself did not proceed to put up a plant and let you do the selling for it?

[fol. 1844] A. The return on the investment was not satisfactory.

Q. And was that the only reason that was given?

A. Yes, that was the only thing, to the best of my knowledge, was ever holding it up.

Q. What was the basis as of February 17, 1960, on which you based your view that "We could do a good job" selling sodium chlorate?

A. Well, I don't know that I had any specific reason for saying that other than I felt all along that my sales organization could sell sodium chlorate and could do a good job of it.

Q. Was there any question raised as of the date of this memorandum of the adequacy or ability of your sales organization to market sodium chlorate?

A. No, the only reason I put that in there at all was the —naturally, when they see—when the salesmen see a new plant like this coming on, they think there is something additional for us to sell, but they can't sell; somebody else is going to sell it, so, naturally they would be a little disappointed. That is more or less window dressing, just to kind of keep the sales department calmed down and not having them all running around screaming because they don't get any new products.

Q. Can you tell us, sir, what steps you would have taken had the responsibility for selling the output of the Penn-

[fol. 1845] Olin plant been assigned to your sales force?

A. Well, it would have been a fairly—been a sizable project, no doubt about that. It would have required additional salesmen, additional technical-service people, all that sort of thing, and, of course, I had never committed myself or committed the sales organization to handle any kind of tonnage like they talk about here.

[fol. 1846] Q. Could you tell us now on the basis of your general chemical experience and knowledge of the pulp and paper industry approximately how many additional salesmen you would need to enter the sale of sodium chlorate in the East?

Mr. De Lone: You mean from a plant located somewhere in the Southeast and to move how much sodium chlorate? It isn't included in the question yet.

By Mr. Freed:

Q. From a plant located in the Southeast and, in so far as the amount of sodium chlorate is concerned, include in your answer the estimate which you made concerning the number of additional personnel needed to sell a given amount of sodium chlorate.

A. Well, of course, you have two entirely different problems to sell a thing like, say, five to seven thousand tons. The tonnage I had been talking about off and on in the past, that really wouldn't be too much of a problem. You can handle that, oh, I don't know, maybe one additional technical-service man, something like that. If you had to sell 25,000 tons, it would be a horse of an entirely different color.

Well, I kind of hate to make guesses like this because in the first place, I may be contradicting something I have [fol. 1847] said previously. I don't recall but just—if—to give you a guess right now, you would—I would say you would certainly need a couple salesmen, a couple men in technical service and maybe some laboratory personnel and a technical-service lab to back the thing up. I just don't—it is the kind of thing you can't put an exact answer to. You would kind of have to get into it how long it would take to sell 25,000 tons at that rate, I mean, with that sales force. I don't know.

Q. In terms of the 15,000-ton estimates which were made at various times prior to 1960, what would be the additional personnel that your organization would have required to sell that amount?

A. Well, you might want to start out with the same additional personnel I just finished talking about, but you would do it sooner. You would sell 15,000 tons sooner

than you would 25,000 tons. You could do it, actually, almost any way you want to, but the fewer personnel and the less laboratory work and technical-service work you put behind it, the longer it takes you to do it.

Q. Well, I believe that in a prior answer you stated a couple, which I take to mean two, extra sales people, two extra technical-service people and a laboratory. Now, that answer was with reference to a 25,000-ton plant. With [fol. 1848] reference to a 15,000-ton plant, do I understand correctly that your answer is the same?

A. Well, I would say—I said you could do it with a—you could put on those additional people and you would sell the 15,000 tons in a sooner—in a shorter period of time than the 25,000. Now, you could—actually, I could say—or you could have one guy and it might take him fifty years. Maybe he would never do it; I don't know. So you are dealing with an awful lot of variables and you just can't reduce it to anything other than a guess.

Q. Have you at any time up to the present date made any careful estimate concerning the number of additional personnel you would need to sell any amount of sodium chlorate in any specific amount?

A. As I say, I am sure I have. I don't recall just exactly what they were but in all this discussion on sodium chlorate, that sort of a thing would come up. I would say I could sell five to seven thousand tons and they will—a plant isn't sufficient unless maybe we make 15,000 tons. They would say, "What additionally do you need to sell that," so I am sure I made a number of estimates. As I say, they probably contradict one another.

Q. Do you recall whether any of your estimates were set forth in written reports?

[fol. 1849] A. I may have written them; I don't recall.

Q. You made reference to the possible need for a laboratory. Could you tell us if the sale of fifteen or twenty-five thousand tons of sodium chlorate would necessitate installing a laboratory?

A. Well, at one time we used to have fairly extensive laboratory facilities, kind of like a little pilot-plant sort of thing, on pulp bleaching and things of that nature. Now, you might need that kind of thing to sell this sodium chlorate. Certainly you need some laboratory facilities to

back up your technical-service personnel. They can't go out and handle all the problems that they run into right on the customer's premises.

Q. Do you have the basis for such a laboratory in your existing organization?

A. Not too much, no. I wouldn't say really at all. We have to start from scratch.

. . . . . .

[fol. 1850] Q. The last paragraph of Grogan Exhibit 7, which is your memorandum to all salesmen, refers to the following:

> "Even though this doesn't increase our sales op-
> [fol. 1851] portunity, it should materially strengthen the Industrial Chemicals Division and this obviously work for our benefit."

Could you explain your reference to "it should materially strengthen the Industrial Chemicals Division"; what do you mean by that?

A. Well, it just gives it another plant, a little larger organization, that sort of thing.

Q. What organization are you referring to?

A. Well, the actual plant that manufactures the sodium chlorate.

Q. Since that is a jointly-owned facility, how does that enhance the strength of the Industrial Chemicals Division in Pennsalt?

A. Well, I guess I overlooked the fact that it was a jointly-owned proposition. I was thinking primarily of it being a plant that we would own and give us just that additional production more—make more chemicals. The more chemicals we make, theoretically, at least, the stronger organization we have.

. . . . . .

[fol. 1852] Mr. Freed: I would like the reporter to mark as Plaintiff's Grogan Exhibit 8 a two-page document, the first of which is a memorandum from Mr. Grogan to Mr. McWhirter dated February 29, 1960, and the second page to be marked 8-B is a memo from Mr. McWhirter back to Mr. Grogan dated March 1, 1960.

(Memorandum dated February 29, 1960, from Mr. Grogan to Mr. McWhirter was marked Plaintiff's Grogan Exhibit 8-A for identification.)

(Memorandum dated March 1, 1960, from Mr. McWhirter to Mr. Grogan was marked Plaintiff's Grogan Exhibit 8-B for identification.)

A. Apparently I was under the impression we were going to make ammonium perchlorate at Calvert.

* * * * * * *

[fol. 1853] By Mr. Freed:

Q. Returning for a moment, sir, to Grogan Exhibit 7, the February 17th memorandum to salesmen, the first paragraph contains the statement:

> "Some of you will undoubtedly come across potential customers for sodium chlorate and we might as well tell them right from the start that Olin Mathieson will be handling the sales and we will handle the production."

Can you tell us the information or instructions which [fol. 1854] were given to you respecting the handling of the sodium-chlorate sales of Penn-Olin and their relationship to activities of your own sales force?

A. I don't remember that I was given any at all. I think I—what stirred this up, I just assumed that if Olin Mathieson was going to sell the stuff that any inquiries we would get we would turn over to them but I don't recall that I was specifically instructed to handle them that way.

Q. Have you at any time since the creation of Penn-Olin had any further instructions respecting the sale of sodium chlorate by the Pennsalt organization?

A. Well, only that the thing is kind of up in the air.

Q. At any time since Penn-Olin was created, has your sales organization engaged in the solicitation of sodium chlorate?

A. Not that I——

Mr. De Lone: What, for Penn-Olin?

A. You mean for ourselves?

By Mr. Freed:

Q. For anyone.

A. Not that I recall.

Q. Do you know, how the sales to Gulf States Paper Company in 1960 came about? Was that through any action of your own organization?

A. No, we had nothing to do with that. As I recall, the [fol. 1855] West Coast handled that entirely on their own.

Q. Are the sales to Buckeye still being handled by Pennsalt?

A. By myself, you mean?

Q. Yes, sir.

A. No, they, the West Coast, handles those now. We actually act as their contact, but the West Coast bills all the stuff.

Q. Do you know whether the Penn-Olin facility is going to take over furnishing sodium chlorate to Buckeye?

A. Well, I would assume. I don't know, no, I do not know. I would assume they would.

Q. Do you recall any conversations with Mr. Clem or anyone else in the Pennsalt organization familiar with the Penn-Olin project respecting the sale of sodium chlorate to customers other than the pulp and paper industry?

A. No, I don't.

Mr. Freed: I would like the reporter to mark as Plaintiff's Grogan Exhibit 9 a set of three documents. 9-A is a memorandum from Mr. Grogan to Mr. Clem dated March 23, 1960. 9-B is Mr. Clem's reply to Mr. Grogan dated March 25, 1960. And 9-C is Mr. Grogan's reply to Mr. Clem dated March 31, 1960, and after the reporter marks this document, I would appreciate it if you could tell us [fol. 1856] whether any further conversations respecting possible sale by Pennsalt of sodium chlorate to the textile industry took place where you were a party to such conversations.

(Memorandum dated March 23, 1960, from Mr. Grogan to Mr. Clem was marked Plaintiff's Grogan Exhibit 9-A for identification.)

(Memorandum dated March 25, 1960, from Mr. Clem to Mr. Grogan was marked Plaintiff's Grogan Exhibit 9-B for identification.)

(Memorandum dated March 31, 1960, from Mr. Grogan to Mr. Clem was marked Plaintiff's Grogan Exhibit 9-C for identification.)

A. Well, apparently I did talk to Clem about the use of sodium chlorate in textile bleaching and actually there have been additional conversations not necessarily with Clem but within my own organization with the idea of developing a process for using sodium chlorate in textile bleaching.

By Mr. Freed:

Q. And how far has consideration of that use of sodium chlorate progressed within your own organization?

A. Not too much. There again, the thing is kind of up in the air. We don't want to find that we are necessarily promoting a process that Olin Mathieson is going to go out and sell. Actually, there is a lot of work that has to be [fol. 1857] done on a thing like that. It is not something that will cook up in maybe six months or a year.

Q. Is this something which requires research and laboratory work?

A. It would, yes.

Q. Preliminary to any sales effort?

A. Yes.

Q. To your knowledge, is any sodium chlorate at the present time being sold for textile bleaching?

A. No, I don't believe it is.

Q. What is the status of plans or consideration within your own organization of undertaking a research project in connection with textile bleaching through the use of sodium chlorate?

A. Well, they are not very well defined right now. We actually are doing a little bit of work on it.

Q. By whom is the work being done?

A. Well, by one of our laboratories. We have, oh, what we call a use laboratory that handles—our basic problem is working with the users of organic chemicals but they are starting a little bit—to do a little bit of work on this, but we are certainly not going to pursue it too aggressively until the whole thing kind of settles down, until we kind of find out exactly where we stand.

Q. If the Penn-Olin project proceeds pursuant to the [fol. 1858] original agreements and despite this lawsuit, will you then go ahead with the textile-bleaching research?

A. I don't know, without knowing the arrangement, say, that Pennsalt has with Penn-Olin, I personally don't know whether we would want to do additional work on this or not. Now, if we, for instance, could get them to get Penn-Olin and let us sell the sodium chlorate into the textile field, then, of course, we would be perfectly willing to spend some time on it.

Q. Have you participated in any discussions directed at that possibility?

A. No, other than—well, you mean the possibility of our selling the chlorate to the textile field?

Q. Yes, sir.

A. Only within our own organization in discussing this particular process.

Q. Can you tell us when the work which is now being done in connection with textile bleaching and the use of sodium chlorate commenced?

A. Oh, I don't think it is more than, well, a couple or three months ago, I would say. Now, this correspondence goes back to 1960 but we weren't doing anything on it then.

Q. What was responsible for triggering the work that is now being done?

[fol. 1859] A. Why, some information we picked up from a chemist that works for the City of Philadelphia.

Q. To your knowledge, is any work on this process being done by or for the Western Division of Pennsalt?

A. No, I don't think they have been doing anything on that at all because there is really no textile industry out in their area to speak of.

Q. To your knowledge has any information about the possible use of sodium chlorate for textile bleaching been conveyed to or transmitted to Olin?

A. I don't believe it has, no.

* * * * * * *

[fol. 1860] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 400

Tacoma, Washington.

EXCERPTS FROM DEPOSITION UPON ORAL EXAMINATION OF HUGH C. LAND TAKEN ON AUGUST 10, 1961

* * * * * * *

[fol. 1861] HUGH C. LAND, being first duly sworn to testify the truth, the whole truth and nothing but the truth, deposed and said as follows:

Direct examination.

By Mr. Freed:

Q. Would you state your name and address for the record, sir?

A. Hugh C. Land, 10 Forest Glen, Tacoma 99.

Q. And what is your present employment, sir?

A. I am Group Vice President, Pennsalt Chemicals Corporation, in charge of two operating divisions headquartered in Tacoma, Washington.

Q. And those two divisions are what, sir?

A. The Agricultural Chemicals Division and Industrial [fol. 1862] Chemicals Division-West.

Q. When did you assume the office of Group Vice President, Mr. Land?

A. In February, 1960.

Q. And was it in February, 1960, that you moved to the west coast from the east?

A. It was perhaps March before I initially came to the west coast, and July before my family arrived. So somewhere in this period I officially moved. Mr. Shanaman, whom I replaced, retired in April, and so there was an overlap there of six or eight weeks from the time I was assigned and transferred here until he retired.

Q. Prior to assuming the office of Group Vice President, what was your position with Pennsalt?

A. General Manager of the Industrial Chemicals Division-East.

Q. And how long had you held that position?

A. From approximately the spring of 1955, until being transferred here.

Q. And what were the responsibilities of the head of the Industrial Chemicals Division-East?

A. Responsible for the manufacture and sale of the chemicals produced at Wyandotte, Michigan, Calvert City, Kentucky, Natrona, Pennsylvania, Houston, Texas, and sales of these chemicals into all but the eleven western states.

Q. And did your responsibilities include the sale of any [fol. 1863] products which were not manufactured in the states east of the Rocky Mountains?

A. Yes, there were a few.

Q. Would you state for us what those chemicals were?

A. Oh, I can't begin to give you the total. Some of these are resale. For instance, alum. We were purchasing from Allied and reselling in the group. This is typical of the type of product that we resold.

Q. Were you also responsible during this period for the sale of such sodium chlorate as Pennsalt sold in the east?

A. I am thinking about your question just a bit. Let me answer it in this fashion: I was responsible for the sale of the sodium chlorate that Pennsalt sold in the east. I don't want to infer that I had any responsibility for the material that was produced in Portland. I did not have any basic responsibility for moving production from the Portland, Oregon plant. To the extent that I committed for materials in the east, certainly I had responsibility for its sale.

* * * * * * *

[fol. 1864] By Mr. Freed:

Q. Was calcium hypochlorite also under your direction and authority, sir?

A. Calcium hypochlorite was one of these products transferred between divisions. During this period I had responsibility for its production. The responsibility for

its sales was in the Chemicals Specialties Division under another General Manager.

* * * * * * *

[fol. 1865] By Mr. Freed:

Q. Prior to the year 1959, before Mr. Shanaman made a commitment to Olin to furnish up to two thousand tons of sodium chlorate, was an offer made to you to make available sodium chlorate for resale by your salesmen?

A. As I recall, the commitment for two thousand tons was made in '57, for the '58 period, as well as for the '59. Since Olin had already started on the test-marketing program we made no request for tonnage and, as I recall, none was offered to us during this period.

Q. Going back then to the first time when an offer was made by Pennsalt in the west to make sodium chlorate available to Olin, were you contacted prior to the commitment to Olin to ask whether you wanted any sodium chlorate made available for sale by your salesmen to pulp and paper companies in the east?

A. Now I am answering prior to '58?

Q. That is correct, sir.

A. Shortly after becoming Division Manager we in the division continued a project to endeavor to determine whether or not we could merchandise sodium chlorate to the pulp and paper industry. During this period I discussed the possibility of obtaining material from Mr. Shanaman, and I was told that while this varied from [fol. 1866] year to year that it would be possible that some would be made available to me if I got to the point that I wanted to have such a commitment.

Q. And what was your response to that offer?

A. We spent first some time reviewing the economics of the project. We asked our sales people to make a survey of the industry and determine whether or not they would be receptive to a second source of supply.

Mr. DeLone: "They"?

A. The industry would be the pulp and paper industry in the southeast, and if they would be receptive to having a second source of supply, and if that source of supply

could be Pennsalt. We were encouraged by the fact that many of the purchasing people called upon—or perhaps I should say some indicated they would be interested. So the sales people attempted to develop, would they be interested in our supplying material from our Portland operation if it would lead to an operation in the east for Pennsalt. Again we were encouraged that Yes, they would be receptive, provided that such offer of sales was backed up with a commitment on the part of Pennsalt that we were actually going ahead with the plant.

Mr. DeLone: Where?

The Witness: In the east.

A. The purchasing people made it very clear to us that [fol. 1867] they were not at all interested in a second source of supply which would continue for any length of time to be located at Portland, Oregon, for they, too, recognize the fact that this was a marginal area for us to ship into, and that if the material ever became tight, as it did periodically, that their supply would be cut off, and since this would be at a period where they would have a difficult time replacing us as a supplier, well, they did not regard us as a good supplier, providing that the production was going to come from Portland. We received sufficient encouragement from the pulp and paper industry in the southeast to proceed with a preliminary evaluation of the economics of this project. If the economics looked favorable we knew that we could proceed with a trial sales program using sodium chlorate from our west coast plant in Portland, Oregon.

Now, the results of this economic evaluation were very discouraging to us. The returns were very low by our standards. I would like to say that at this time we had a very active program within the division of capital expenditures. We were embarked company-wide on a major capital program. More than fifty million dollars had been committed in the five-year period after Mr. Drake became President, better than seventy per cent of which came into the Industrial Chemicals Division as approved [fol. 1868] projects. Consequently, we had many approved projects to work upon. We were reviewing many other types of projects. When we found sodium chlorate had

a very low return we frankly were discouraged by the possibility of being able to jell this as a project, and consequently never proceeded at that time to take advantage of the offer of material from Portland, because we were not sure that we could back it up with a production facility in the east, and since our information had told us very clearly that our sales effort would not be welcomed unless we had such a facility we did not go any further with our discussions with the paper mills as far as to get material to supply them.

By Mr. Freed:

Q. At the time the arrangement with Olin was entered into, did Pennsalt make any commitment as to its intentions to construct a joint production facility?

A. Commitments, sir?

Q. Yes, sir.

A. At the time that the test market with Olin was considered, as I recall, the decision had been made that it was unlikely that we in the east could come forth with a project that would be sufficient in return of investment to meet our standards, and consequently at that time accepted the possibility that a joint venture should be considered, and that Olin Mathieson was a logical partner to consider.

[fol. 1869] Q. At that time, did Pennsalt make a commitment that it would undertake a joint production facility with Olin?

Mr. DeLone: Could we fix the time to which both of you have reference?

By Mr. Freed:

Q. Would you do that, sir?

A. About the end of 1957, I believe is the correct time, and to the best of my knowledge there was no commitment in terms of how I understand the use of the word commitment.

Q. To your knowledge, was Olin in its test-marketing sales able to make a commitment to the pulp and paper companies in the south respecting the construction of a production facility for sodium chlorate itself?

A. I am not in a position to comment upon how Olin Mathieson conducted their sales with—what their approach was, what they found in the market.

Q. To your knowledge, did Olin at any time prior to the Penn-Olin negotiations at the start of 1960, ever indicate to Pennsalt that it had made a decision to construct a sodium chlorate facility in the east?

A. To my knowledge there was never such a statement.

Q. Can you tell us, sir, the difference, if you know, between the kind of commitment or undertaking which an Olin salesman selling sodium chlorate in the east in 1958, and '59, could make to a pulp and paper company customer in comparison with the kind of commitment that a Penn- [fol. 1870] salt salesman could make?

Mr. DeLone: In light of his previous answer I object to the form of that question. I think he has already answered it.

By Mr. Freed:

Q. Subject to Mr. DeLone's objection, sir, would you answer the question?

A. I am not in a position to have any knowledge of how they approached the sales to the pulp and paper industry. I am sure you recognize they were selling the people to a far greater extent than we were, so they had information that I didn't have.

Q. But are there any facts known to you which would bear on the question of whether Olin was able to make a more firm commitment with regard to producing sodium chlorate in the east than Pennsalt was?

A. I have no facts available, sir.

Q. If in fact Olin was not able, during the period 1958, 1959, to commit itself to the construction of a sodium chlorate facility in the east, were there any other factors that would place Pennsalt salesmen at a disadvantage compared to Olin salesmen in trying to sell sodium chlorate?

Mr. DeLone: I object to the form of that question in light of the last answer, because other factors were mentioned.

[fol. 1871] Mr. Freed: I don't quite understand the objection.

Well, I will withdraw the last question.

By Mr. Freed:

Q. Sir, what was the nature of Olin's better position to sell sodium chlorate in the east in 1958, and 1959, in contrast to Pennsalt's?

A. I felt that Olin could test-market the southeast in better fashion than Pennsalt could, for the simple reason that they were selling pulp and paper mills in the southeast which we were not. They had installed their chlorine dioxide process I believe in many of these mills, and consequently had an entree to them on the basis of contacts in relation to chlorine dioxide that we had not developed in the southeast.

Q. Was it your understanding, sir, at the time of the test-marketing program that the test-marketing was being done with a view towards a joint Olin-Pennsalt sodium chlorate operation in the east if successful?

A. In my mind when the test-market was put together I was convinced that Pennsalt could not on an economical basis put together a project which would enable us to have a producing facility in the east. I was of the opinion that a partner, or some other arrangement of that nature, must be undertaken, and certainly Olin Mathieson was one of several who might be considered for such a venture.

[fol. 1872] Q. Was Olin Mathieson at this time, 1957, and 1958, the only partner that you were considering?

A. I think the answer to that is yes, if you limit it to my personal consideration. I can't speak for what others might have considered.

Q. Are you aware of any other companies that were at this time being considered by other members of Pennsalt's management?

A. I don't believe my recollection is sufficiently accurate to suggest any others.

Q. At the time the sales arrangement with Olin was entered into, was it contemplated that if a joint production facility were eventually established that Olin would be the exclusive sales agent for it?

A. I am sure that this question had not been resolved. It had certainly been discussed. There were all sorts of opinions as to whether or not this was the best arrangement. I don't think there was any attempt to decide the details of how such an arrangement should be worked. We at this stage were still attempting to see, could a project be put together which would comply with the standards of Pennsalt, and once we had such a project then was the time to sit down and decide the details of how such a project would be actually put into being.

Q. Then in the period beginning late 1957, and running [fol. 1873] through the end of 1959, no decision was made with respect to Olin becoming exclusive sales agent of a prospective sodium chlorate plant in the east, is that correct, sir?

A. To the best of my knowledge that is correct.

Q. During this period, was there a decision by Pennsalt management that Pennsalt had nothing to offer in the way of sales effort in relation to a joint sodium chlorate facility?

A. On the contrary, I am sure that many people within Pennsalt felt that they had something to offer. We had experience in the northwest in the successful application of chlorate, to chlorine dioxide, to pulp and paper. We, therefore, had technical service information that Olin Mathieson did not have. At least we could help them. I believe this service was offered to Olin Mathieson at that time. So certainly this was considered an asset.

Q. And did you yourself hold that belief in the period at least beginning in late 1957, namely, that Pennsalt did have something to offer in its sales effort in connection with a joint facility?

A. I certainly shared the opinion that Pennsalt's technical service in the northwest was doing an excellent job.

Q. And did your opinion extend to a belief that that experience in the northwest could be of assistance in an eastern sales effort?

[fol. 1874] A. Yes, sir.

Q. Can you tell us then in the interest of a successful test-marketing experiment whether any decision was made that only Olin and not Pennsalt would engage in the test-marketing effort?

A. By a decision now are you referring to a corporate decision?

Q. Either a corporate decision or a decision on your part, if your decision was all that was required.

A. I am not aware of any corporate decision in this matter. In fact, I believe I am aware of the fact that the sales effort to the extent that it was available from the west was made available, and as far as I know was used by Olin in its test-marketing. The decision that I made within the division was that it was not profitable for me to expend the effort of sales people to duplicate or attempt to assist Olin Mathieson in its test-marketing. This was solely a divisional matter.

Q. And did this decision extend to those pulp and paper accounts in which Pennsalt did have a favorable reception, an entree?

A. We continued to sell small quantities of sodium chlorate through this entire period into areas where it was profitable for us to do so.

Q. Could you tell us what areas those included, sir?

[fol. 1875] A. Well, one I remember specifically is Buckeye Cellulose, Procter and Gamble's plant at Foley, Florida.

Q. Were there any others?

A. I believe in that period there was one or two others. I can't be specific, though.

Q. What were the instructions, or what was the practice in handling requests from pulp and paper companies to Pennsalt salesmen with regard to the sale of sodium chlorate in the period beginning late 1957, to the end of '59?

A. I don't recall any formal instructions, Mr. Freed. I have testified previously what the general understanding was. I don't think there were any formal instructions.

Q. Then confining your answer solely to the practice that you followed, how did you handle in this period inquiries initiated by a paper company to Pennsalt for sodium chlorates?

Mr. DeLone: I object to that as having already been fully covered.

By Mr. Freed:

Q. And subject to that objection, sir, would you answer?

A. Let me repeat what I thought I had said before. Each year salesmen would turn into his sales manager a list of customers he felt he could sell. This was reviewed in Philadelphia. The decision was made as to whether or [fol. 1876] not to handle such an inquiry if it was made at that time. We advised Mr. Shanaman of the amount of the material we felt we could handle, and proceeded on another year.

Q. Were there any inquiries to your knowledge at the end of 1957, to Pennsalt other than from Buckeye for sodium chlorate?

A. Yes, I am sure there were several. I do not remember any of them specifically.

Q. Were any such inquiries turned over to Olin Mathieson during this time?

A. To the best of my recollection, no.

Q. The memorandum of December 30, 1959, Plaintiff Drake's Exhibit 43, refers in the last sentence of the second paragraph to the fact that "Our contacts with paper mills turned up inquiries from time to time such as the present one we have with Waldorf Paper Products in Wisconsin."

A. Yes.

Q. Can you tell us the nature of that inquiry from Waldorf?

A. I do not remember the nature.

Q. Can you tell us what was done with the inquiry?

A. To the best of my recollection I at this time talked to Mr. Shanaman about whether or not he was interested in supplying us with additional material for Waldorf Paper. This was at the end of 1959, and at which time Mr. Shanaman told me he was able to market all of his sodium chlo- [fol. 1877] rate in the west, and unless I was using Waldorf Paper as an entree for production in the east that he had no interest in supplying me with material. Consequently, we would go back to Waldorf and tell them we were not in a position to supply them with material.

Q. And do you recall whether the name of Waldorf was turned over to Olin?

A. I do not recall that it was.

* * * * * * *

[fol. 1878] Q. In light of the arrangement which had [fol. 1879] already been entered into with Olin for the sale of sodium chlorate in the east, can you tell us the purpose of getting a projection regarding Pennsalt's ability to sell sodium chlorate in the east at this time?

A. As I mentioned, it strictly was a matter of keeping the project as started in November going until it was finished. This type of information needed to be recorded. We needed to have that further documentation, if you will, of the comments that he had given me verbally, and, as he had reported here, we had had discussion of the project before, our five-year planning meeting, and I am only insisting here that he complete the record.

Q. Then is it correct, sir, that as of the date of this memorandum there had been no final decision on the part of Pennsalt not to enter the sodium chlorate market in the east alone?

A. Mr. Freed, the final decision on sodium chlorate for me will come when I cease to be a member of Pennsalt. There is no finality in the corporate sense. You don't decide one thing irrevocably. As conditions change you merely attempt to put a judgment upon the conditions as you see them at the time. We very often find that a project like this, in my experience, goes through cycles, and this, of course, is the reason why you want to have the information previously done completed to a logical [fol. 1880] stopping point, because very often you find yourself going back, as we did many times in this project, and building from what you had. If you lose what you had before you have lost a good deal of company effort and time.

Q. But is it correct, sir, that as of the date of this memorandum no final decision had been made?

A. If your reference to final is irrevocable I would have to say yes.

* * * * * * *

[fol. 1881] Q. Mr. Land, in Plaintiffs Drake Exhibit 13, which is a memorandum from you to Mr. Drake of December 27, 1956, a reference was made in the middle paragraph to Pennsalt's prior studies of return on investment in the sodium chlorate project in the east, and the following sentence appears: "Incidentally, the last time we talked with Olin Mathieson about building a chlorate plant they told us they had investigated the possibility of building a plant in the east, and that their cost figures, both capital and manufacturing, were surprisingly close to ours." Are the conversations referred to here with Olin the ones you have previously referred to in which Pennsalt was represented by Mr. Grogan?

A. They are.

Q. And did you at any time receive the cost figures, cost [fol. 1882] estimates, referred to in this sentence?

A. I did not receive any cost estimates, and I believe there were no formal cost estimates submitted. This was merely a matter of conversation, which was recorded, repeated for what it was worth.

Q. Was Mr. Grogan at the time of Plaintiffs Drake Exhibit No. 13 the man in your division who had responsibility for making or analyzing cost figures, both capital and manufacturing, respecting the chlorate project?

A. The answer is no.

Q. Do you know, or do you recall, the basis on which you made the statement in this memorandum that Olin's figures were surprisingly close to Pennsalt's?

A. The basis was, as I can recall, strictly a statement made to me by Mr. Grogan of his conversation. I did not place any undue emphasis upon it, because as you have indicated, Mr. Grogan was not in a position to evaluate manufacturing costs or return on investments in a precise fashion, and I am sure all he was doing is recording an exchange of conversation.

Mr. DeLone: You said "as you have indicated;" did you mean Mr. Freed, or did you mean as you had indicated?

The Witness: I meant Mr. Freed.

A. You had asked me in a previous question, was Mr. [fol. 1883] Grogan the person who would evaluate such things within the company, and I said no.

By Mr. Freed:

Q. Then is it correct, sir, this sentence which begins with the word "Incidentally" was a summary on your part of information which had been furnished to you by Mr. Grogan, and was based on no information apart from that?

A. That is correct. That is the reason I used the term "we" in here. It is not information that I had directly. I am recording for the division information we had.

Q. In the first paragraph of Plaintiffs Drake Exhibit No. 13 you made the statement that "It should be helpful to know why we cannot justify a sodium chlorate plant in the east, especially since this product fits ideally into our product line." Can you explain to us what you meant about how sodium chlorate fit into Pennsalt's product line at the time of this memorandum?

A. Yes, sir. We in the Industrial Division in the east were selling chlorine, caustic soda, ammonia and some peroxide to the pulp and paper industry. Since sodium chlorate also fits to the pulp and paper industry this would be another ideal product to fit that same sale effort if we could be justified in producting this product in the east.

Q. On the basis of your experience as a marketer, or man in charge of the marketing of chemicals to the pulp [fol. 1884] and paper industry, can you tell us, Mr. Land, whether the addition of products to the product line of your company had any influence on the ability of Pennsalt to sell the products originally in the line?

Mr. DeLone: Would you repeat that question, please?

(Whereupon, the Court Reporter read from his machine shorthand notes as follows: "On the basis of your experience as a marketer, or man in charge of the marketing of chemicals to the pulp and paper industry, can you tell us, Mr. Land, whether the addition of products to the product line of your company had any influence on the ability of Pennsalt to sell the products originally in the line?")

Mr. DeLone: I don't know of any testimony that he is a marketer, but taking the question as one in charge or responsible for marketing, if he can answer it it is all right with me.

A. You could develop a theory that products in a line support each other, and I am sure that a profitable usable product that could be added to our pulp and paper sales line could assist us in marketing other products we were selling to the pulp and paper industry. In fact, this is one of the reasons that kept sodium chlorate on our project [fol. 1885] list long after it would have been dropped under usual circumstances.

By Mr. Freed:

Q. You made reference, sir, to the fact that "You could develop a theory."?

A. I could.

Q. Has it been your experience, sir, that the addition of chemical products to the line of chemicals which Pennsalt furnishes to the pulp and paper industry has been a benefit in the over-all sale of chemicals to pulp and paper customers? And I do not confine you to sodium chlorate, but to your general chemical background and experience.

A. Generally I would say that is true.

Q. With respect to your last answer, sir, does the addition of chemical products to the line of chemicals which you sell to the pulp and paper industry normally benefit the company insofar as the sales overhead or sales expense is concerned?

A. I have to qualify an answer here, in that normally you would expect that a product that was added to the line would be able to be sold through existing personnel, and in so doing would certainly decrease the amount of overhead sales-wise assigned to each product sale. The qualification I make is that if the product added to the line is of a nature that it itself requires substantial technical service, then in fact it may cost from a sales [fol. 1886] standpoint more than any other products in the line. So it is very hard to generalize.

Q. And focusing your attention to the addition of sodium chlorate to the line of chemicals furnished to pulp and

paper companies, would you tell us how your previous answer relates to the addition of that product of the line?

A. Yes. Without any question, in my opinion the addition of sodium chlorate to the line of chemicals we are now selling to the pulp and paper industry in the east would require a substantial addition to our technical service effort, and a substantial period of time to make us a qualified sales group in the east.

Q. Sir, would it be correct to conclude from your last few answers that the addition of sodium chlorate to a chemical company's line of products sold to pulp and paper companies would tend to decrease the sales overhead in selling those chemicals insofar as the salesmen are concerned, but in addition to that factor a company would have to take into account the additional expense which might be incurred in providing technical assistance? Is that the import of your testimony, or have I summarized it incorrectly?

Mr. DeLone: I object to your summarizing in terms of a chemical company when the questions heretofore have been based on this witness's experience in Pennsalt.

[fol. 1887] Mr. Freed: I accept your observation, sir.

By Mr. Freed:

Q. I ask you to confine your response to my question to Pennsalt.

A. I think you have summarized it properly as far as Pennsalt's Industrial-East is concerned.

Q. Apart from the economies or expenses involved in selling a full line of chemicals, or a fuller line of chemicals, to pulp and paper companies, has it been your experience, sir, that the carrying of a fuller line of chemicals aids your company in the sale of individual products to pulp and paper companies?

A. If you will let me answer that in the context that there is no overriding factor that will overcome the economics of a particular project which determines whether that product can be added to the line. With that reservation what you say is true. A fuller line can influence sales of all products in the line in my opinion. The benefit,

however, must show in the over-all evaluation of the cost of adding the product to the line to be meaningful.

Q. If the economic factors which you have mentioned with respect to adding products to a chemical line are satisfied, is it a factor under those circumstances that the ability of your company to carry a fuller line of chemicals will aid it in its ability to compete with other suppliers of chemicals to pulp and paper companies?

[fol. 1888] A. I don't know whether I can intelligently elaborate upon the effect of its helping sell other products in the line, and how that helps me measure up competitively. Anything obviously that helps Pennsalt do a better job helps it competitively, but these situations are never identical, and it is almost impossible to make one general comparison with competition generally. It is very difficult to do.

. . . . . .

[fol. 1889] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 401

New York, N. Y.

EXCERPTS FROM DEPOSITION OF WILLIAM CECIL GARDINER TAKEN ON SEPTEMBER 13, 1961

* * * * * * *

[fol. 1890] WILLIAM CECIL GARDINER, being first duly sworn by the notary public, testified as follows:

Direct examination.

By Mr. Copley:

Q. State your name and address for the record, sir.

[fol. 1891] A. William Cecil Gardiner, 1084 Ridge Road, Lewiston, New York.

Q. What is your present position with Olin Mathieson?

A. Manager, electrochemical research; research department, Chemicals Division, Olin Mathieson Chemical Corporation.

Q. Could you tell us briefly what your duties are in that position?

A. I supervise the activities of several research chemists and chemical engineers in the field of electrochemistry.

Q. What would your relation with Mr. Wood be in the company?

A. Mr. Wood is, I believe, an electrochemical engineer in the operating department. I am in the research department.

Q. And your present relation to Dr. Wojcik?

A. Dr. Wojcik, so far as I know, is on the staff of the Chemicals Division.

Mr. Copley: Would you read back the last answer.

(Answer read.)

Q. And at the present time you have no direct [fol. 1892] relationship with him in so far as the organization and the flow of Olin personnel is concerned?

A. No.

Q. Doctor, when did you first have any connection with sodium chlorate?

A. In the 1930s.

Q. Without going into great detail, could you tell us what that relation was initially?

A. Probably cost estimates on proposed processes.

Q. And at this time you are employed by Olin?

A. No; Mathieson Alkali Works.

Q. Perhaps for clarify, unless I state otherwise, when I refer to Olin, I mean Olin and its predecessor corporation, to the extent that you have had relations in connection with them.

Could you briefly trace for us your sodium chlorate history with Olin, or its predecessors, starting at the time subsequent to your initial relations with sodium chlorate?

A. I knew that Olin had a sodium chlorite process for which sodium chlorate is a raw material. It would be technically interesting to have been in the sodium chlorate business so that we could produce our raw material. I did not have any direct contact with the sodium chlorite [fol. 1893] or chlorine dioxide operation.

I was in Europe in 1946 as a scientific consultant and wrote a report on the German production of sodium chlorite which utilized sodium chlorate and sulfur dioxide.

Through the years I have read the scientific literature pertaining to sodium chlorate production on the chance that it would some day be a process to be operated by Olin.

From time to time there were requests by management to look at the economics of producing sodium chlorate. This was usually stimulated by sources of information from Europe.

I had an engineer working for me early in 1950—'50s, who was assigned to work on sodium chlorate, but after several months he was discharged because he was not doing a good job. The work was dropped for lack of personnel.

Work was resumed several years ago in the research department. I cannot give you the exact dates, but the reports starting with an H-35 series and a new series have reported on the work done since that time.

Q. And you are speaking now of the mid-'50s?

A. Yes.

Q. To date? From the mid-'50s to date is [fol. 1894] the period you are speaking of when you say these reports reflect the activities of the research and development?

A. Yes.

Q. You mentioned that from time to time requests had been made by management to evaluate the process for producing sodium chlorate. Could you specify, beginning with the earliest request, under what circumstances these requests were made?

A. It would be a request from the director of research to make the study.

Q. And who would that have been from the time of the earliest request?

A. Mr. Gage, R. E. Gage.

Q. What was the time involved—what date?

A. From the '30s on.

Q. In other words, the requests that were made of you to conduct these studies were all made by Mr. Gage?

A. There were subsequent directors of research.

Q. Who were those?

A. There was a Dr. G. P. Vincent, Dr. Carl M. Prutton, Dr. Bruno Wojcik, Mr. B. H. Nicolaisen.

Q. And that brings us up to date?

A. Right.

Q. When did Dr. Wojcik assume the position of [fol. 1895] director of research? Do you recall?

A. No.

Q. Could you give us an approximation?

A. In the middle '50s somewhere.

Q. From the middle '50s on, was Dr. Wojcik the only individual who requested that you perform or conduct surveys regarding sodium chlorate?

A. Yes.

Q. And by surveys, I would mean all research and development, studies.

A. Yes.

Q. And who is the engineer you spoke of who performed work in sodium chlorate research in the mid-'50s?

A. I can't remember his name.

It just occurred to me. Prodan.

Q. What was Mr. Prodan's assignment?

A. To study the literature on the production of sodium chlorate and recommend a research and development program.

Q. And did he recommend such a program?

A. No.

Q. Did someone subsequent to Mr. Prodan's discharge undertake his duties?

A. Not until work was started by Mr. Holmes [fol. 1896] several years later.

Q. What is the most recent report in the—I suppose it can now be the U series that has been conducted by Olin regarding sodium chlorate?

A. U-2.502.

Q. I did not mean to confine your attention to reports in the U series. Have there been other recent reports regarding sodium chlorate by Olin Mathieson?

A. Not to my knowledge, "Mr. A. J. Holmes, before he left Olin earlier this year, wrote out in longhand a first draft of a report entitled 'Economic Analysis of Platinized Titanium Chlorate Cell Anodes and Pilot Plants for their Test.' However, no work has been done on that report since Mr. Holmes left."

Q. Doctor, the report to which you refer is dated 4-27-60, and report typed 5-18-1960. Has Olin conducted any research and development activities relating to sodium chlorate since this report was dated?

A. Yes. Some experimental work was done for several months after this.

Q. What was the nature of that experimental work?

A. The study of life tests of platinized titanium anodes.

Q. What were the results of these tests?

A. We concluded that platinized titanium was a competitive material for graphite for the production of sodium chlorate and was worthy of the tests on a larger [fol. 1897] scale.

Q. Who made these conclusions?

A. Mr. Holmes.

Q. He was the sole individual who conducted these tests?

A. He had a laboratory assistant by the name of R. F. Fogle.

Q. Were these two men the only participants in the testing?

A. There was a technician.

Q. And who was that?

A. Roland Grandin.

Q. What happened to their recommendation that larger cells be tested?

A. The proposal was on the budget for 1961, but it was cancelled and the work was discontinued.

Q. Who made the recommendation that this be included in the 1961 budget?

A. I did.

Q. Did Mr. Holmes make a written report to you?

A. Nothing further than what is in this. For the record, this report U-2.502.

[fol. 1898] Mr. Copley: For easy reference, I would like the reporter to mark this as Plaintiff's Gardiner Exhibit No. 1.

(Report U-2.502, "Electrochemical Survey Report," marked Plaintiff's (Gardiner) Exhibit 1 for identification.)

Q. To whom did you make your recommendation after you had received this report from Mr. Holmes?

A. It was only in the form of a budget request, together with many other research projects, and turned over to the manager of development who probably turned it over—who passed it up to his superior.

Q. And the manager of the development at this time was who, sir?

A. Bernard H. Nicolaisen.

Q. Do you know to whom Mr. Nicolaisen passed this report after you spoke to him about it?

A. To Mr. C. C. Hightower.

Q. What was Mr. Hightower's role in this negotiation, or in this series of events?

A. Mr. Nicolaisen reported to Mr. Hightower. Mr. Hightower, I believe, was the manager of operations.

Q. Did you prepare the budget request which would relate to the larger cells of sodium chlorate?

A. They were prepared by Mr. Holmes under my [fol. 1899] supervision.

Q. What material did you give to Mr. Nicolaisen?

Mr. Barnum: In what connection?

Mr. Copley: In connection with this budget request and the proposal by Mr. Holmes to build larger cells.

A. It would be a very brief description of the project with the estimated money, and I probably gave it to him in a longhand form.

Q. Do you recall what Mr. Nicolaisen's reaction to your report was?

A. No.

Q. Did you discuss it with Mr. Nicolaisen?

A. Probably.

Q. Do you know what action Mr. Nicolaisen took after you submitted your proposal to him?

A. It was assembled with other similar writeups of projects and submitted to Mr. Hightower.

Q. By other projects, you mean projects other than sodium chlorate?

A. Yes.

Q. Did you ever talk with Mr. Hightower regarding these proposals?

A. No.

[fol. 1900] Q. Do you know what happened to the proposal after it reached Mr. Hightower?

A. No.

Q. Do you know whether or not Mr. Hightower forwarded the proposal to higher management?

A. I think so.

Q. Subsequent to Mr. Hightower's receipt of the report to which you referred, did you discuss the progress of the report with Mr. Nicolaisen?

A. Yes.

Q. And what did Mr. Nicolaisen say?

A. He said that that project had been eliminated from the 1961 budget.

Q. Did he say why?

A. We had projects that were more interesting for the manpower that we had to develop them.

Q. Did Mr. Nicolaisen say at what stage the proposal had been eliminated?

A. No.

Q. And were the other projects to which you referred related to operations at Niagara Falls?

A. Not necessarily.

Q. Were the other projects related to sodium chlorate?

[fol. 1901] A. No.

Q. Did you ever speak with Mr. Hightower about this matter again?

A. No.

Q. Have you spoken to anyone regarding the reasons that the proposal was eliminated?

A. No.

Mr. Copley: Off the record.

(Discussion off the record.)

Q. Dr. Gardiner, would you direct your attention to page 3 of Plaintiff's Gardiner Exhibit No. 1?

Mr. Copley: Off the record.

(Discussion off the record.)

Q. In part this report states:

> "A study has been made to evaluate the proposal to attach chlorate cells to the new Niagara chlorine plant to produce the sodium chlorate required by the sodium chlorite plant."

Does the word "proposal" refer to Mr. Holmes' proposal, or to what does that refer, sir?

A. I think that was my proposal.

Q. I think I have lost the sequence of events. What do you mean by "my proposal"?

A. My idea; let's do something.

[fol. 1902] Q. With whom did you discuss this idea prior to the preparation of this report?

A. Holmes.

Q. With Holmes, I see. I have it now.

Subsequently in this paragraph on page 3 it states:

> "The process is economically attractive."

Who made this estimate?

A. Holmes.

Q. Had any studies other than the one conducted by Mr. Holmes been made regarding the economic attractiveness of the project?

A. No.

Q. Did Mr. Holmes make any reports which deal with the economic attractiveness of this project, other than what is contained here in Plaintiff's Gardiner Exhibit No. 1, I should add?

A. Not unless it is in the other U-2.501 or in Mr. Holmes' draft of a report relating to platinized titanium anodes.

Q. I see. Do you recall discussing the economic attractiveness of this proposal with Mr. Holmes?

A. Not specifically, but I am sure that we did.

Q. Do you recall discussing the subject of economic attractiveness with anyone else?

A. No.

[fol. 1903] Q. On page 4 of Plaintiff's Gardiner Exhibit No. 1, under the heading "Introduction," the report makes reference to purchases from Hooker, and plans to expand consumption at Niagara to 220 tons a month.

Do you see the paragraph to which I refer, sir?

A. Yes.

Q. Do you recall whether this consumption was expanded?

A. It has not been expanded.

Q. What is the present consumption of sodium chlorate at Niagara?

A. I presume that it is 120 tons per month.

Q. And this requirement is supplied by Hooker; is that correct?

A. Yes.

Q. Do you know what reference the word "plans" has?

A. I have heard it discussed and I referred Mr. Holmes to the operating department to get these consumption figures.

Q. When you say you heard it discussed, whom did you hear discussing this?

A. I think that it was Mr. Nicolaisen.

[fol. 1904] Q. What did Mr. Nicolaisen say?

A. I don't remember.

Q. Did you discuss it with anyone else?

A. I don't remember.

Q. On page 7 of Plaintiff's Gardiner Exhibit No. 1, under the heading "Conclusions," the report in part states:

"The attachment of a chlorate plant to the Niagara chlorine plant is economically attractive."

Do you recall discussing this conclusion with anyone, sir?

A. Only with Mr. Holmes.

Q. Did you discuss it or do you recall discussing it with Mr. Nicolaisen?

A. No.

Q. Dr. Gardiner, what is the status of the full-scale chlorate plant consideration referred to in paragraph labeled "Conclusions"?

A. At the moment it is dead.

Q. Well, we know about its inception and its death. Could you fill us in on the considerations?

A. Excuse me, I misunderstood your question. By a full-scale chlorate plant, we would think in terms of [fol. 1905] 40 tons per day, I think it is.

We have done all our estimating on the basis of 40 tons a day, and that is what we consider full scale.

Q. What happened to this consideration?

A. It became Penn-Olin.

Q. Was this report made in connection with Penn-Olin?

A. No.

Q. Was it in any way connected with the Penn-Olin technical investigation that was carried on in 1960?

A. No.

Q. Doctor, are you aware of the fact that a letter agreement had been entered into on February 11, 1960, between Olin and Pennsalt with respect to the formation of Penn-Olin? Generally familiar, not specifically.

A. Was I?

Q. Yes, sir.

Mr. Barnum: As of what period of time, Mr. Copley, if I may?

Mr. Copley: Was he aware when it was done?

Mr. Barnum: On February 11th, for example?

Mr. Copley: For example.

[fol. 1906] A. Yes.

Q. Do you know why, after that letter of intent was signed, that Olin was conducting research and development relating to sodium chlorate cells?

A. We considered it as a test of platinized titanium for use in our chlorine cells.

Q. My technical knowledge is certainly at a low ebb this morning. Why would you make these tests on chlorate cells if your purpose was to utilize them in chlorine cells?

A. Both cells currently require graphite. Platinized titanium has been claimed to apply to both chlorine and chlorate cells. We were set up to test it first in chlorate cells. We gradually shifted over to entirely chlorine cells, but in the meantime, merely as convenience, we continued the tests that were already started in laboratory chlorate cells.

Q. Did anyone in Olin take issue with the statement that the attachment of the chlorate plant to the Niagara Falls chlorine plant was economically attractive?

A. I think Mr. Wood considered that we had left out some important financial considerations.

Q. Do you recall what those considerations were?

[fol. 1907] A. I think he calls them nuts and bolts.

Q. And could you elaborate on the nuts-and-bolts theory?

A. I think that he refers to such things as real estate, sewers, offices, services, which the research engineer is inclined to overlook.

Q. Who in the management of Olin was aware of your studies, yours and Mr. Holmes' studies, respecting a sodium chlorate plant at Niagara Falls?

A. I don't know of anyone outside of the distribution list. Should I add which appears on the first page?

Q. Who is the—if I may use the word—highest ranking man on this distribution list in the management of Olin?

A. Mr. C. C. Hightower.

Q. Was Mr. Logan, do you think, aware of the studies respecting the sodium chlorate plant at Niagara Falls?

A. I don't know.

Q. Did you discuss with Mr. Hightower at any time the fact that these tests were going on?

A. I don't recall that I did.

Q. Did you have any discussion with Mr. High-

[fol. 1908] tower respecting these tests?

A. I don't recall that I did.

Q. Do you know either from discussions with Mr. Hightower or from discussions with others who might have talked with Mr. Hightower what Mr. Hightower's reaction was to this report?

A. No, I don't.

Q. Do you know how far up in the company's management the recommendations in this report, namely, Plaintiff's Gardiner Exhibit No. 1, went?

A. No, I don't.

Q. Was Mr. Block aware that these tests respecting the establishment of a sodium chlorate plant at Niagara Falls were going on?

A. Yes.

Q. Did you talk with Mr. Block about this?

A. He had lost interest at the time this report was written. Earlier, he did.

Q. What were your earlier discussions with Mr. Block?

A. In 1959 Mr. Block and Mr. Wojcik used to come to Niagara Falls for research and development reviews periodically, maybe every two months or so, at which time current progress on our projects was reviewed.

[fol. 1909] Q. What was Mr. Block's early view regarding the establishment of a chlorate plant at Niagara?

A. He was not active in coming to Niagara after this idea of mine on putting in a few cells at Niagara was under study by Mr. Holmes.

Q. What discussions did you have prior to the inception of your idea with Mr. Block respecting a chlorate plant at Niagara Falls?

A. We discussed only the technology of the platinized titanium anodes, the possibility of cooperative development with Vickers-Krebs, and we also, I think, discussed the proposals by Vickers-Krebs to build us a sodium chlorate plant. These proposals were the subject of electrochemical survey reports, of which you have copies, I believe.

Q. What was Mr. Block's view of the development of the platinized titanium anodes?

A. Interesting if successful.

Q. Did he subsequently lose interest in this project of developing platinized titanium anodes?

A. I don't know.

Q. Did you ever discuss your idea of establishing a chlorate plant at Niagara with Mr. Block?

A. I don't think so.

[fol. 1910] Q. Do you know what his views on the subject were?

A. No.

Q. When did Dr. Wojcik and Mr. Block begin to make their trips to Niagara?

A. Right after Mr. Block became responsible for the Industrial Chemicals Division, but I don't remember when that was, except that it was in the late '50s.

Q. Do you recall the first time that you discussed sodium chlorate research and development with Mr. Block?

A. No.

Q. What was the nature of the earlier discussions you had with Mr. Block?

A. We reviewed our current development results. We were also investigating outside sources of information, and he was commenting on means of pursuing our search for outside technology.

Q. What means did Mr. Block mention?

A. Excuse me?

Q. What means did Mr. Block mention?

A. To get the International Division and see what is available in Europe.

[fol. 1911] Q. Were there any other means, except procuring technology on foreign shores that Mr. Block mentioned?

A. Excuse me?

Mr. Copley: Read the question, please.

(Question read.)

A. No.

Q. In your former answer, sir, what did you mean by "investigate outside sources of information"?

A. Mr. Holmes' first report was a literature study of chlorate processes, and he reviewed all sources of information on the technology of sodium chlorate, including domestic and foreign.

Q. Do you recall what Mr. Block said respecting the current development results in sodium chlorate?

A. He encouraged us to proceed.

Q. In what way?

A. He told us where we were apt to find suppliers of—suppliers and fabricators of titanium for the platinized titanium cell.

Q. What else did Mr. Block say?

A. I know that he commented on our cell designs, but I do not remember any specific comments.

Q. Do you recall in general what he said about the [fol. 1912] design of the cells?

A. No.

Q. Was he favorably impressed?

A. He was willing to continue the investigation.

Q. Aside from the development of platinized titanium anodes, was Olin conducting other research and development with respect to sodium chlorate in 1959?

A. No.

Q. How long did Mr. Block maintain an interest in the development of platinized titanium anodes?

A. I don't recall him being there past about the middle of 1959, or after he had a heart attack.

* * * * * * *

[fol. 1913] Q. You mentioned that Mr. Wood felt that the recommendations left out the nuts and bolts. On the basis of his objections, was any recalculation made regarding economic attractiveness or unattractiveness of the project?

A. Not to my knowledge, no.

Q. Do you recall to what extent Mr. Wood's objections altered the estimates contained in this report?

A. No.

Q. Dr. Gardiner, it is the government's reading of electrochemical survey reports prior to Plaintiff's Gardiner Exhibit 1 that they were concerned generally with the development of a sodium chlorate cell and with the research and development respecting sodium chlorate. As Plaintiff's Exhibit No. 1 points out, the emphasis was shifted to a chlorate plant in conjunction with your Niagara Falls chlorine plant.

Could you describe for us what caused that shift in emphasis?

A. I considered this chlorate plant at Niagara as an adjunct to the chlorine plant as a glorified pilot plant which would allow us to develop further the platinized

[fol. 1914] titanium anode without spending a serious amount of money such as would be required for a full-scale plant, such as 40 tons per day.

Q. On page 7, under "Conclusions"—I have referred to the paragraph before—the report states that a 120-tons-per-month chlorate plant would provide information needed to build a full-scale chlorate plant as well as supply chlorate to the chlorite plant at a considerable savings.

Was the purpose of the pilot plant which you mentioned in your previous answer to provide a test for a later full-scale chlorate plant at some other site than Niagara?

A. Yes.

Q. At this point, what was the site that you had in mind?

A. The previous engineering reports had indicated that a plant in the Southeast, such as at Chattanooga, Tennessee, would be desirable.

Q. So, as I understand your testimony, this chlorate plant at Niagara would serve two functions, namely, a pilot plant for a subsequent chlorate plant in the Southeast, and, secondly, to supply the chlorate needs at Niagara for the chlorine plant?

[fol. 1915] A. That's right.

Q. After this recommendation or proposal was eliminated from the 1961 budget, what activities did Olin's research and development division engage in relating to sodium chlorate?

A. Only to continue the life tests on small platinized titanium anodes and laboratory cells.

Q. Where was this done?

A. In the laboratory at Niagara.

Q. And by "small," what do you mean?

A. I think that it was 10 amperes.

Q. In layman's language, what do you mean?

A. We were testing electrodes one inch by five inches long in maybe five cells. In other words, five pieces of titanium coated with platinum of that size so it was very small scale.

Q. Is Olin conducting this research today?

A. No.

Q. When was it discontinued?

A. I think it was about three months ago when the last of those electrodes failed.

Q. Could you amplify the reasons that it was discontinued?

A. We were confining our tests to platinized titanium [fol. 1916] anodes in chlorine cells, and that work is continuing, but not on chlorate.

Q. What was the reason that the tests on chlorate cells were discontinued?

A. The project was killed in the 1961 budget.

Q. And since then it has not been revived?

A. That's right.

Q. So would it be correct to say, sir, that since the killing of the project in the 1961 budget Olin has conducted no research and development relating to the perfection of a sodium chlorate cell?

A. That's correct.

Q. And would it also be correct to say that they performed no research with sodium chlorate at all?

A. That is correct.

Mr. Copley: I would like to ask the reporter to mark as Plaintiff's Gardiner Exhibit No. 2 a document from Dr. Gardiner to Dr. Wojcik dated November 26, 1956.

(Document above referred to marked Plaintiff's (Gardiner) Exhibit 2 for identification.)

Q. Do you have a copy of this in your files, sir?

A. We have it here.

[fol. 1917] Q. What was the purpose for which this report was prepared?

A. To acquaint ourselves with the status of the prior art.

Q. Could you tell us what patent problems Olin faced at this stage of the game respecting sodium chlorate?

A. We had no patent on sodium chlorate. We were finding what patents were in existence in the field.

Q. And did your study reflect any patent barriers in so far as possible entry in the sodium chlorate production by Olin was concerned?

A. The patents that were in existence were necessarily barriers, but there would be other paths to follow so that I don't think it was a complete barrier.

Q. Did you, or anyone else in Olin, make an effort to determine the availability of these patents to Olin?

A. Not to my knowledge.

Q. Who asked you to prepare this report?

A. No one. It is a normal procedure in research or development to review the literature as the first step on a new project.

[fol. 1918] Q. Did you later discuss this report with Dr. Wojcik?

A. I don't recall having done so.

Q. Do you know what Dr. Wojcik's reaction was to this report?

A. No.

Q. With whom did you discuss the report?

A. Mr. Holmes, and probably Mr. Turner and Mr. Fogle.

Q. At this time, were these people your subordinates?

A. Yes.

Q. Do you recall ever discussing the report with Mr. Logan?

A. No.

Q. With Mr. Nicolaisen?

A. No.

Q. The second paragraph of the first page of Plaintiff's Gardiner Exhibit 2 states that "The only ones that seemed to me to be important are the two Schumacher patents assigned to Western Electrochemical, and possibly Osborne assigned to Hooker."

Do you recall discussing this conclusion with anyone?

[fol. 1919] A. No, I don't.

Q. Do you recall anyone ever disputing your conclusion?

A. No.

Mr. Copley: I would like to ask the reporter to mark as Plaintiff's Gardiner Exhibit No. 3 "Electrochemical Survey Report H-35.502."

(Document above referred to marked Plaintiff's (Gardiner) Exhibit 3 for identification.)

Mr. Copley: Have you a copy of this report?

The Witness: Sorry, I didn't bring that material.

Q. On page No. 2 of this report is a statement that reads as follows:

> "Special emphasis is given to the position of Pennsylvania Salt Manufacturing Company in the domestic chlorate production picture."

Could you tell us, Dr. Gardiner, why special emphasis was given to Pennsylvania Salt, which is now Pennsalt Chemical Company?

A. Because—I think it is explained somewhere, but we believed that Oldbury would not be receptive to licensing their process since they were already operating a plant in [fol. 1920] the Southeast, and the American Potash & Chemical Corporation was also selling in that area and possibly had already announced the construction of a plant in the Southeast, so that it seemed as if the Pennsylvania Salt Manufacturing Company was the only company that was not already committed to a plant in the Southeast.

Q. Aside from the fact that Pennsalt did not have a plant in the Southeast, was there any other reason why special emphasis was given to them?

A. Not that I know of.

Q. On page No. 9 of Plaintiff's Gardiner Exhibit No. 3, under the heading "Buy 'Know-how'" is the following statement:

> "Pennsylvania Salt Manufacturing Company should be approached first because of present relationship and because of their West Coast location."

Did Olin make any overtures to Pennsalt?

A. Not to my knowledge, except that they later formed Penn-Olin, but I think that was much later.

Q. Who would be the person in Olin charged with the responsibility for obtaining information on sodium chlorate technology from an outside source?

A. The business arrangement to gain permission for [fol. 1921] an exchange of information would probably have been arranged by Mr. Logan. The obtaining of information on a technical scale would have been by Mr. Wood or myself.

Q. Do you know if Mr. Wood exerted any efforts in this direction?

A. No.

Q. Do you know or have you ever heard of Mr. Logan discussing such an arrangement?

A. No.

Q. Do you recall who made the determination that special emphasis would be given to Pennsalt?

A. Did you say "would be"?

Q. Yes, sir; I am referring——

A. Is it would be or should be?

Q. Well, the word is "is." Special emphasis is given to the position of Pennsalt.

A. I think that that wording is Mr. Holmes'.

Q. Aside from the wording import, do you recall who started the idea that special emphasis be given to Pennsalt?

A. It could have been mine.

Q. But you have no direct recollection on that?

A. That's right.

[fol. 1922] Q. I would like to direct your attention again to Plaintiff's Exhibit No. 2, which is the patent report which you prepared. You testified, I believe, sir, that the patent situation did not present a complete barrier, but did in some measure constitute a barrier. Could you specify the areas in which patents caused there to be a barrier to the company to enter into the sodium chlorate field?

A. I refer to the two Schumacher patents. These are for a particular cell design and for a method of treating the liquor coming from the cell in order to obtain sodium chlorate from it. These particular pieces of equipment and process would have been barred by the patents, in my opinion, for our use without going to them for a license.

Q. From your study of the previous patents pertaining to sodium chlorate, did the two Schumacher patents constitute the only ones which would be a barrier?

A. That was my opinion.

Q. Did Olin ever approach Schumacher?

A. No, not to my knowledge.

Q. Why not?

A. I don't know.

Q. Did Olin in its research and development pertain-[fol. 1923] ing to sodium chlorate conduct research and development in the area covered by the Schumacher patents?

A. No.

Q. Is the technical area covered by the Schumacher patents one which can be approached from different angles?

A. Yes.

Q. Did Olin consider that the Schumacher patent was a substantial barrier to its research and development activities in sodium chlorate?

A. No.

Q. What I am trying to get at, sir, is there are more ways than one to skin a cat and Schumacher had one of them, but there are other ways.

A. That is correct.

Mr. Copley: I would like to ask the reporter to mark as Plaintiff's Gardiner Exhibit 4 a document from Mr. Karr to Dr. LaLande, dated April 8, 1960.

(Document above referred to marked Plaintiff's (Gardiner) Exhibit 4 for identification.).

Q. Dr. Gardiner, do you recall discussing with anyone in Pennsalt the possibility of setting up a joint research and development program?

Mr. Barnum: Will you show the witness the document [fol. 1924] which you have offered as an exhibit, please?

Mr. Copley: Yes.

Q. I would like to show you Plaintiff's Gardiner Exhibit 4. Would you read the first two sentences of that into the record, sir?

A. "During the last meeting at Portland with the Olin Mathieson representatives, Dr. Gardiner mentioned to me privately that he thought that Pennsalt and Olin Mathieson should set up a joint development program on sodium chlorate for possible benefit to Penn-Olin in the future."

That was it.

Q. Do you recall discussing this with Mr. Karr?

A. Vaguely.

Q. What came of these conversations?

A. I was told by Mr. Wood that he was trying to set up a date for Mr. LaLande and Mr. Nicolaisen and myself to discuss the joint research and development program for Penn-Olin.

Q. Was such a meeting set up?

A. It was not.

Q. What was the reason?

[fol. 1925] A. I don't know. I think possibly procedure —this proceeding.

Q. By "this proceeding," you mean——

A. This court action, whatever——

Q. You mean U.S. vs. Penn-Olin.

Do you recall ever discussing with anyone the reasons why the proposal for a joint research and development program was dropped?

A. No.

Q. Is there such a joint research and development program today?

A. No.

Q. Dr. Gardiner, in answer to interrogatory 56, Olin mentions negotiations or discussions with Electro-Chimie respecting the possibility of purchases of sodium chlorate information from them. What role did you play in these talks?

A. I believe that I specified the engineering details for the plant that we were considering, and on receipt of their reply it formed the basis, I believe, of one of our engineering reports.

Q. What was the reply from Electro-Chimie?

A. They gave us a blueprint showing a proposed plant and the capital costs in francs and the operating costs, [fol. 1926] also in francs, and we interpreted those as best we could to United States conditions.

Q. What was the result of your interpretation and analysis of the data provided?

A. As I recall, it appeared that the sodium chlorate plant was a low-return investment.

Q. In the answer to which I have previously referred, it is stated that Olin did not pursue the possibility of purchasing such information from Electro-Chimie.

Could you tell us the reasons why Olin did not pursue this possibility?

A. As I recall, we got a competitive proposal from Vickers-Krebs and by comparison the Vickers-Krebs seemed more attractive.

Q. Who made this determination?

A. Either myself or Mr. Holmes.

[fol. 1927] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 402

New York, N. Y.

EXCERPTS FROM DEPOSITION OF STANLEY DE J. OSBORNE TAKEN ON OCTOBER 4, 1961

* * * * * * * *

[fol. 1928] STANLEY DE J. OSBORNE, called as a witness by plaintiff, having been first duly sworn by the Notary Public (Jacqueline Birkhahn), testified as follows:

Direct examination.

By Mr. Freed:

Q. Sir, would you state your name and home address?

[fol. 1929] A. Stanley de J. Osborne, 1 East End Avenue, New York City.

Q. Are you the president of Olin Mathieson Chemical Corporation?

A. I am.

Q. Are you a director of that company?

A. I am.

Q. How long have you been president?

A. Since May 2, 1957.

Q. Prior to that where were you employed?

A. I was employed by Olin Mathieson.

Q. In what capacity?

A. For the previous six months as financial vice-president and head of the International Division. Prior to that, the International Division.

Q. When did your employment with Olin commence?

A. Well, with Mathieson, the predecessors, in 1950, as treasurer of Mathieson Chemical Corporation.

Q. Do you have any field of specialization such as chemistry or chemical engineering, or a particular scientific background?

A. No, sir.

Q. Sir, did you make the final decision in February of 1960 that Olin would participate in a joint venture with [fol. 1930] Pennsalt?

Mr. Connelly: I object to the form of the question. It is assuming that a final decision was made.

Mr. Freed: I will revise the question. Strike the word "final."

Q. I ask whether in February 1960 it was you who made the decision that Olin would enter into a joint venture agreement with Pennsalt, providing for the creation of Penn-Olin Chemical Company.

A. As I recall, that was not a final—or a decision; it was a letter of intent in February 1960. I believe that to be true, and the signing of that by Olin was under my approval.

. . . . . .

[fol. 1931] Q. Apart from the location of the Bowaters' plant or consuming facility, can you tell us whether the same cost estimates, the same size of plant and the other financial considerations that went into the preparation of a recommendation regarding Chattanooga were used or incorporated into the plans for the Charleston facility?

A. I think, sir, that I made the remark before that I don't believe the Chattanooga plant ever reached the stage, at least to my knowledge, of engineering, full engineering and economic studies ready for presentation.

Q. Do you know at what stage the Chattanooga proposal was at the time the Charleston location first came to Olin's attention?

A. As far as my attention was concerned, Chattanooga was merely, generally speaking, an area proposal, and Chattanooga was picked because we had land there.

I don't believe, at least from my standpoint, it ever got to the point of a serious proposal within a specific period of building that plant. It may have been in the Division, but certainly never got to me for approval.

. . . . . .

[fol. 1932] Q. Mr. Osborne, I wonder whether upon your examination of Exhibits 1 and 2 you can describe for us the [fol. 1933] difference in timing and any other relevant factors apart from location that pertain to the change from a proposed chlorine caustic plant at Chattanooga to a plant at Charleston, Tennessee.

A. May I examine these?

Q. By all means, sir.

A. Could you repeat the question now?

(The question was read.)

A. First of all, I would like to emphasize that a Whither report, as far as I am concerned, is merely a set of objectives.

As far as I know and recall, Chattanooga was not a specific plant that was recommended by the Chemicals Division in final form to the management of Olin.

The Charleston plant was proposed primarily because the opportunity arose at Charleston, Tennessee, to supply an over-the-fence requirement of a large customer which took care of a substantial portion of the marketing problem of that product.

Q. From your examination of the two Whither Reports, can you tell us what the difference in timing was in that proposed construction schedule of the plant at Chattanooga and the plant at Charleston?

A. The 1959 Whither Report indicates the beginning of construction at the end of the first quarter of 1960 and [fol. 1934] completion by the middle of 1961 at Chattanooga.

The 1960 Whither Report indicates the start of construction at Charleston, Tennessee in the middle of 1960 and the completion in the twelfth month of 1961.

Q. Can you tell us, sir, with particular reference to Mr. Connelly's objection earlier, when the final decision was made by Olin to proceed with the joint venture?

A. I would say late August, early September 1960, as I recall.

Q. At that time did your decision take into consideration the status of Olin's plans to proceed with a chlorine caustic soda plant at Charleston?

A. No, sir, not that I recall.

* * * * * * *

[fol. 1935] Q. Could you elaborate on what you mean by financing outside the balance sheet?

A. A joint venture can create its own debt without having the parent companies guarantee it. If indeed it can, and, if that is the case, then it does not appear except as a note on the parent companies' balance sheet. It does not appear as a liability for any part that is borrowed to construct a plant.

Q. What is the significance outside of the appearance or non-appearance on the balance sheet of the guaranteed or unguaranteed feature of debt?

A. A guaranteed debt is a debt of the parent company. An unguaranteed debt is only remotely—it is a very contingent liability of the parent company only if the subsidiary completely fails, and therefore it is not considered by accountants nor the financial world as part of the debt structure of the parent company.

[fol. 1936] Q. Are there any circumstances under which the debt of a subsidiary which is unguaranteed would not become a responsibility of the parent company where the debt of a guaranteed subsidiary would?

A. Certainly.

Q. Can you describe the circumstances in which that would happen?

A. An unguaranteed debt is one on which the banks or whoever takes the debt is perfectly willing to ride on the credit of the subsidiary company or the affiliated company and does not look upon the parent company for repaying if there should be any failure.

Q. What was or is the credit basis of the joint subsidiary which would lead banks to give an unguaranteed loan?

A. First of all, the equity put into it by the parent company and, secondly, the business that they are going into.

Q. How would that differ from an investment by one company alone, for example, Olin, of precisely the same amount of capital to go into the same business?

A. If it is owned above 50 per cent, the accountants then say that it is a fully-consolidated subsidiary and therefore, in consolidation, the debt appears on the balance sheet.

Q. But apart from accounting reasons, can you tell us [fol. 1937] the difference in substance, the differences which

you would call to the attention of a bank to justify a loan on a different basis to a joint company than to a company which you are financing on your own?

A. If there are two equal subsidiaries and you ask a bank to finance a wholly-owned subsidiary entirely on its own without any guarantee of the parent, there is no difference.

Q. What is it in the joint venture format that enables you——

A. It does not appear on your balance sheet. It is not part of the overall credit of the corporation if it is owned less than 51 per cent.

Q. But what is it in the format of the joint company that will influence a bank to make an unguaranteed loan which, in circumstances where it would not give an unguaranteed loan to Olin as the sole owning corporation?

A. It is not a question of guarantee or non-guarantee, sir. It is a question of, in one case, if it is guaranteed on both sides, the same effect would exist.

If Olin and Pennsalt guaranteed the subsidiary's debt, then it would be a debt of Olin and Pennsalt. If it is not guaranteed, whether it is 50 per cent or not, it would not be a debt of Olin legally but, on the balance sheets, if it is [fol. 1938] a wholly-owned subsidiary it would appear as a debt, because the consolidation would take place.

Q. Perhaps I have not made my question clear. I would like to know the factors apart from accounting reasons which enable you or you hoped would enable you to finance a joint company on an unguaranteed basis in a situation where the bank would refuse to finance the venture on an unguaranteed basis if you were the only owner.

A. I don't think, sir, that is the point at all, because the bank would ask for a guarantee or not ask for a guarantee based on the intrinsic value of the subsidiary, whether owned or not owned, but if it is a non-guaranteed company, there is a great deal of difference if it is an affiliate as against being wholly-owned.

Q. But those differences are accounting differences.

A. They are accounting, and in accounting comes your whole credit structure and your whole debt structure as viewed by the financial community.

Q. But are there any differences in substance in those

ingredients which make up a sound credit format for the company, the subsidiary?

Mr. Connelly: I don't understand what you mean by differences in substance. You mean differences other than the ones that the witness has already mentioned?

[fol. 1939] Mr. Freed: Yes, sir, thank you, Mr. Connelly.

A. I just don't understand the question, what you are driving at here.

Q. Let us take two examples. In one case, $4 million capital is put up for a subsidiary, and $3 million is borrowed. The sole owner of the subsidiary is Olin.

In that circumstance, I gather, the debt, the $3 million debt of the subsidiary, appears on your balance sheet and is guaranteed by the parent company Olin.

A. Not necessarily.

Q. Under what circumstances might it not be guaranteed?

A. Any number of circumstances. In either case, it could be either guaranteed or not guaranteed, depending upon how good the bank considers the company that it is lending the money to.

Q. In the case of a sodium chlorate project such as you are discussing in this case, did Olin explore the possibility of putting up the $4 million capital on its own and borrowing the balance of the money as an unguaranteed loan?

A. No, sir, because we never got that far.

Q. Is that a possibility which was excluded in the course of your studies and decision-making processes as to whether to proceed by a joint venture or to go into the business alone?

[fol. 1940] A. It was certainly one of the attractions of the joint venture, yes.

Q. But is it an attraction which you determined would not be available if Olin entered the business on its own?

A. There is no question about it.

Q. And why is that, sir?

A. Because it would be a part of the debt structure of Olin. If it were a hundred per cent owned subsidiary of Olin, it would be a debt of Olin, whereas this way it is only an indirect debt of Olin, and therefore does not appear as part of the debt structure.

Q. But there was no determination made whether or not

that debt would be guaranteed or unguaranteed by Olin; is that correct?

A. Not to my knowledge, no.

Q. If Olin had determined to enter upon this particular project, the sodium chlorate facility, on its own, and had put up double the amount of capital which it agreed to do with Pennsalt, and had borrowed double the amount of money that it has undertaken to borrow for Penn-Olin, would the return on the investment to Olin have been the same?

A. Well, it all depends on how you consider the return on investment. If you include debt and equity, the return is the same for one as the other.

[fol. 1941] Q. And do you include both of those factors?

A. Yes, sir, although that is a matter of argument.

Q. In terms of Olin's overall balance sheet, then, can you tell us the difference between your investment in the joint venture and the possible alternative which you might have had of an investment in a wholly-owned venture?

A. If the joint venture had been financed as a joint venture was expected to be financed, and I recall the figures correctly, each of the parents was to put in a million and a half dollars of equity and there would be borrowed $4½ million dollars by Penn-Olin. In that case, the balance sheet of Olin would have a million and a half dollars of investment in Penn-Olin.

On the notes of the balance sheet, the auditors would say that the Penn-Olin Company, in which Olin had a million-and-a-half-dollar investment, also owed the banks $4½ million.

Q. In practical terms, would Olin stand behind the debt of Penn-Olin to the same extent that it would stand behind the debt of a wholly-owned subsidiary whose loan was unguaranteed?

A. Depending entirely upon the terms of the loan agreement which has never been negotiated.

. . . . . .

[fol. 1942] Q. Directing your attention, Mr. Osborne, to the extract page which is entitled "Section 4" and in particular to the reference in sub-paragraph A to chlorates and perchlorates, I wonder whether you can tell us whether

the receipt of this Whither Report with that discussion of the chlorate business constitutes, to your recollection, the first time in which the matter of sodium chlorate came to your attention.

A. To the best of my recollection, yes.

Q. At the time of this Whither Report, did you learn anything about Olin's efforts to enter the chlorate business or Olin's existing activities in the chlorate business, apart [fol. 1943] from those matters specifically stated in this excerpt?

A. Not as far as I can possibly recall.

Q. When as far as you can recall was the first time that you had a conversation with anyone in the company about the status of Olin's consideration of entry into the sodium chlorate business?

A. I would still think that was the Block conversation prior to February 1960.

Q. Mr. Osborne, could you describe for us the extent of Olin's interest or activity in the solid missile fuels business today?

A. Yes, sir. Our interest is, I would say, minimal. We are doing some work in the energy part of the Organics Division, I think in the gas generator business and in the double-based fluid ball explosives end.

Q. What is the status of activity within the company with reference to ammonium perchlorate?

A. As far as I know, zero.

Q. And are there any other solid propellants for missile fuels that Olin is presently producing?

A. Not that I know of. Technically I am very bad in this area.

Q. Can you tell us what consideration has been given to Olin's entry into the ammonium perchlorate business up to [fol. 1944] the present time?

A. As far as I am concerned, none.

Q. Have you had occasion to consider the circumstances under which Olin might enter that business?

A. No.

Q. Are you familiar, sir, with the reference to perchlorates, both in the letter of intent and in the articles of incorporation of Penn-Olin Chemical Company?

A. Yes, sir.

Q. Can you tell us the thinking that lay behind the inclusion of those chemicals?

A. No, sir, I do know that there was no consideration given for their production.

Q. Are you familiar, sir, with any research and development work which Olin has performed in recent times in connection with ammonium perchlorate?

A. I am not familiar with that.

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[fol. 1945] Q. In the event that the demand for ammonium perchlorate should increase measurably in the near future, what part of your organization would undertake consideration of Olin's possible entry into the production of that chemical?

A. That could come from three or four different areas. The head of Research might consider it; the Explosives Division which encompasses the missile area would; and, lastly, with Penn-Olin Company, the Chemicals Division could, if there was to be any consideration of it.

Q. As far as you know, has consideration of ammonium perchlorate been foreclosed by any action of your company or is it simply a matter that you have not been called upon to consider up to the present time?

A. I do not believe it has been foreclosed. Neither do I believe that there is any consideration being given to it.

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[fol. 1946] Q. Mr. Osborne, returning for a moment to Osborne Exhibit 1 which is the 1959 Whither Report, you will note that on page 51 an economic summary of a sodium chlorate plant at Chattanooga is furnished. This is on Exhibit 30 which was revised in October 1959.

I wonder with specific reference to the data shown on this page whether you can tell us what, if any, further check or study was made of the figures or the underlying information that is summarized in this Whither Report.

A. To my knowledge, none.

Q. Do you know why?

A. Yes, sir, because the Whither Report is merely a

division's ideas of what they might want to have in future years. It is a path rather than a request.

Q. Do you know, sir, whether management or any management committee expressed any opinion one way or another on the Chattanooga sodium chlorate project upon receipt of the October 1959 revision?

A. Specifically the Chattanooga sodium chlorate plant I do not recall, and I do not believe there was any such evaluation.

Q. Then the decision not to proceed with further re-
[fol. 1947] finement or study of the data shown on page 51 was a matter that reposed solely within the Chemicals Division?

A. Yes, sir.

. . . . . .

[fol. 1948] Q. Was any consideration given in this meeting to the possibility that Pennsalt might proceed with the project on its own?

A. Not that I recall.

Q. If Olin stayed out?

A. I don't believe there was any.

Q. With particular reference to the reasons given on page 4 of these minutes for your decision not to proceed with the Penn-Olin venture, can you tell us, sir, what changes were effected or brought about in subsequent discussions and subsequent studies that led you to go on with the Penn-Olin venture?

A. First of all, the division under Mr. Block did not take my decision as a final decision but went back to work to re-evaluate the entire matter.

Secondly, Mr. Drake came down to see me—I believe he was in Maine at the time—with a group of the Pennsalt people to discuss this matter and to tell me that in his opinion he had gone to his board, had gotten their approval, and that the rate of return, which was one of the powerful factors which made me not want to go ahead with the thing, was not as low as the Chemicals Division had originally [fol. 1949] indicated.

He was much more optimistic than our own people had been. In questioning, I believe, with McWhirter, it

became apparent to me and to others that maybe Pennsalt's figures that had been transmitted to us on (a) capital use and (b) cost of operation as a battery limits plant were somewhat too conservative. The biggest single item that came out of this discussion was that the plant in fact was a 26,500-ton plant instead of a 25,000-ton plant, which changed the economics from about 8.7 per cent to 10.1. That was No. 1.

With that kind of a return on investment and with the fact that we had gone that far down the road, and with the fact that we felt that it could be financed for a very small amount of equity on each part, and the desire of the Chemicals Division, the strong desire of the Chemicals Division to be and stay in this business as a basic business rather than as a resale business, I changed my mind and went ahead.

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[fol. 1950] Q. In your discussion at this meeting, was any consideration given to Olin's own existing or contemplated consumption of sodium chlorate in its own operations?

A. I frankly don't think we consume any, do we? I don't think we even produce bright sulfite in our paper mills, so I am not entirely sure.

* * * * * * *

[fol. 1951] Q. And to your knowledge at the present time are there any pulp or paper facilities of Olin in existence or in contemplation that would use sodium chlorate pulp?

A. Not that I know of; because I am not technically competent to say what sodium chlorate would be used for except for brightening sulfite, and we do not produce that, except there has been talk by the Paper Division of wanting an expansion into whiteboard, and that is not even being considered at the present time.

* * * * * * *

[fol. 1952] Q. You referred before, I believe, to a policy enjoining salesmen from using the company's purchases as a means of inducing sales.

Is that policy applicable to people higher up in the company than simply salesmen?

A. Well, first of all, there is a policy as to the salesmen. That is to prevent the obvious—every time they go in to see a customer, say, "Well, we bought something from you, and you've got to buy from us," and then having a succession of salesmen from other divisions following in behind.

There is no such policy restriction on anybody else at higher levels, because we don't consider it necessary to have such a policy, because it is understood that we don't use this practice.

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[fol. 1953] Cross examination.

By Mr. Connelly:

[fol. 1954] Q. Mr. Osborne, in your direct examination you testified in response to Mr. Freed's questions concerning the time of executing the Penn-Olin letter of intent in February 1960, that Olin had under consideration three alternative suggestions for engaging in the production of sodium chlorate, one being the proposed McIntosh operation, another being the Chattanooga proposal, and the third being the Calvert City proposal.

At that time had Olin made a decision that it would, in one form or another, engage in the production of sodium chlorate?

A. No, sir.

Q. So that is it correct to say that that was another alternative that was then under consideration, that is to say, not engaging in that production in any form?

A. And continued until September 1960.

Q. You mentioned also in direct examination something about the ambition of Mr. Block to have a chemical facility in the TVA region as being part of the Chattanooga plant proposal. Did that have to do with sodium chlorate?

A. Not per se.

Q. That was a chemical facility of some kind?

A. Electro-chemical facility.

Q. You were examined at some length on the subject of [fol. 1955] the so-called Whither Reports of the Chemicals Division in 1958, 1959 and 1960 concerning their comments on proposed facilities for sodium chlorate.

Will you describe generally the procedure that is followed in connection with a divisional request for a capital appropriation for a new project?

A. A Whither Report as such is not necessarily part of an appropriations request. The Whither Report is intended to give the division the opportunity and the requirement of facing its future over a number of years and indicating what, in the division's opinion, is the direction to which the division should head and where the capital funds available to it should be devoted.

It is only when a Whither Report as a whole is approved that it becomes a program of expenditure which then must have the capital asset appropriation requests in detail submitted one by one after proper engineering, market studies and other requirements, the patent studies, et cetera.

In the case of the Chemicals Division, no Whither Report as such has ever been adopted as a program. It has only to date been a divisional opinion of where they would like to go. It has not yet received corporate approval.

Q. Generally speaking, in the case of capital appropriation requests submitted by the Chemicals Division, what [fol. 1956] happens, what is the procedure that is followed following receipt now of the formal request?

A. The first receiving point is the Accounting Department which checks the figuring and checks to see that the mathematics are correct as to return and as to the various other elements of figuring.

It then goes to the so-called CAR Committee, which is an appointed committee representing me, in fact, which has the vice-president for engineering as its chairman and various other people in the company as participants or members of the committee. They go into many of the details of this thing, and either send it back to the Division for re-appraisal or re-engineering or deny it or approve it.

If there is a denial, the division has the right of appeal to me. If there is an approval, of course the division is happy, and it comes to me; and normally, unless there is some question in my mind, I sign it. If it is over a hundred thousand dollars, it goes to the Financial Operating Policy Committee. If it is a program which could be many millions of dollars, it goes to the full Board.

Q. I take it that there are each year several requests for

capital appropriations that come up from the Chemicals Division.

A. Many.

[fol. 1957] Q. All of those go before the same Capital Appropriations Committee?

A. Yes, sir.

Q. And are they charged with the responsibility of making selections between alternative proposals?

A. Yes, sir.

Q. And recommending action?

A. And recommending action.

Q. Does that same committee have any function with reference to capital appropriations requests by other divisions of the company?

A. Yes, same thing.

Q. What are the other divisions of the company?

A. Organics; Packaging; Squibb; Winchester-Western; Metals; International.

Q. Does each of those divisions come up with its own special requests for capital appropriations for projects affecting it?

A. Yes, sir.

Q. You mentioned in answer to Mr. Freed's question on direct examination that in giving consideration to the Penn-Olin project as to whether the joint venture was or was not a desirable course to follow, one of the considerations you took into account was the financial one.

[fol. 1958] Were there any special financial problems affecting Olin during the period from 1958 to 1960?

A. Very serious ones.

Q. Would you describe generally what they were and how they arose?

A. As a result of a decision reached in, I believe, 1954, Olin embarked on an aluminum program which required the investment, before we got all through, of close to half a billion dollars. In our own cash, that amounted to somewhere around $125 million to $150 million. The balance was borrowed, which left the corporation, in 1957, shortly after I came in—and in 1958—in a financial stringency.

I had to stop, in 1958, all capital appropriations from all divisions until we got ourselves straightened around. I had to go to the market for a hundred million dollars

of borrowed money, 60 of which provided new money, and until we got ourselves straightened around, the other divisions other than Aluminum unfortunately were strangled or semi-strangled.

However, by the middle of 1959 it became apparent that we were over the hump. The company had pulled in and gotten itself straightened out financially, and a limited number of appropriations were opened up. It still is a fact that we pick and choose carefully to see where our [fol. 1959] capital expenditures are going.

Today all of the divisions are operating under programs. The Chemicals Division is not yet, although it is getting close to it, and they all are getting part of the $50 million to $65 million a year which we are now able to spend on capital assets.

Q. Does the Chemicals Division or does any other division of the company have any authority to proceed with a capital appropriations project without having it submitted to your Capital Appropriations Committee and ultimately to you?

A. Yes, sir, the divisions have a right to proceed with their own up to $25,000 in total. It can't be pieces of 25. The project has got to be complete at $24,999.

Q. Beyond that the authority does not exist?

A. That's right.

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[fol. 1960] Redirect examination.

By Mr. Freed:

Q. Mr. Osborne, you responded to Mr. Connelly with a statement that the corporation does not approve Whither Reports as such, I believe. Can you tell us whether anyone above the level of the Chemicals Division, any of the management groups which review the Whither Reports, disapprove all or parts of Whither Reports?

A. Very often, yes, sir.

Q. In between approval and disapproval, does your Management Committee or Staff Committee or yourself comment on portions of the Whither Reports?

A. The modus operandi of a Whither Report is that the

division writes up what you have seen. They send it to my staff and myself some ten days before a fixed-date meeting.

We read it over.

We are apt on occasion to meet and discuss it without the division.

Then the division makes a presentation.

At that presentation, comments are made, questions are asked, opinions are given back and forth as to the value of the whole project. Requests are made for re-study, for reconsideration, or, if the whole project looks like a sound project—and it is I who give that—approve the Whither as a program, which means that there may be a capital [fol. 1961] outlay over a four-year period in the nature of $10 million or $15 million which I then consider an approved Whither program.

That does not give the division the authority to spend. The authority to spend only comes through the CAR itself, but a program has been taken to the board by me and explained and the board's opinion sought and given as to the program as a whole, and each capital asset appropriation under that program is given a separate *vetting* just the same way as anything would be, and my hope is that 90 per cent of our new plant expenditures would be on a programed basis.

Q. In the absence of disapproval or modification of any part of a Whither Report, is the Chemicals Division free to proceed to refine and carry forward studies relating to the projects that are mentioned in Whither Reports?

A. Certainly they can do some studying if it doesn't involve expenditure, but they can't go ahead on their own and further go into engineering and large expenditure, unless they got an approval of the project.

Q. In the absence of disapproval of a Whither Report in which, for example, a sodium chlorate project is proposed and outlined, is the division free to proceed with the preparation of a capital appropriations request?

A. No, sir. It must be approved in the Whither Report or the head of the division must come to me and say, "I [fol. 1962] want to build this kind of a plant that is not in the Whither program. Will you be willing to permit us to present it to the CAR Committee, and these are the reasons," and the chances are the CAR Committee will also discuss it with them.

Some new invention may come out of research that nobody possibly could have contemplated when writing a Whither. Any number of things. Conditions can change.

Q. In light of your testimony, could you recall whether any action was taken by management with respect to the October 1959 Whither Report insofar as the sodium chlorate project was concerned?

A. There was no positive action, no.

Q. And in the normal course of corporate life what was the effect of no positive action?

A. That until somebody came to me or to the Staff Committee for transmittal to me, they could not go ahead and make any serious study until they had gotten the indication that there would be an interest.

Q. To your knowledge, did Mr. Block, who I assume was head of the Chemicals Division at that time, do anything about the sodium chlorate project in the October 1959 Whither Report between its submission in October, 1959 and the conversation which you have previously testified to in early 1960?

A. Not to my knowledge.

[fol. 1963] Q. Could you recall any indication to him of disapproval or doubt on the part of management with respect to the sodium chlorate?

A. I can't recall that at all until the thing came up for the joint venture decision sometime in late January 1960.

Q. Would the timing of the October 1959 amendment to the Whither Report have been such that in the normal course of your operations no action would be taken by management until sometime the next year with respect to the matters contained in it?

A. Not necessarily.

Q. Then can you account in any way for the apparent lapse of the sodium chlorate project from the October 1959 Whither Report to the time of your Penn-Olin conversations with Mr. Block in early 1960?

A. I can't account for it, no. It was within the division.

Q. And have you discussed with anyone else in the division what happened in this period?

A. No, sir.

[fol. 1964] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 403

EXCERPTS FROM DEPOSITION OF DEREK RICHARDSON, TAKEN ON SEPTEMBER 13, 1961

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[fol. 1965] DEREK RICHARDSON, being first duly sworn by the notary public, testified as follows:

Direct examination.

By Mr. Freed:

Q. Would you state your name and your home address for the record, sir?

A. Derek Richardson, Twin Ponds Lane, Syosset, New York.

Q. What is your present position with the defendant Olin Mathieson?

A. Vice president of marketing, Chemicals Division.

Q. And how long have you occupied that post?

A. Since July 1, 1961.

Q. What was your position prior to that date?

A. Vice president, aluminum sales, for the Metals [fol. 1966] Division.

Q. Can you tell us when you began the vice presidency of aluminum sales?

A. I think the job title was effective approximately June or July of 1958, but I actually started to work in that job on what was considered a temporary basis on January 4, 1958. They loaned me, you see, from the Chemicals Division for supposedly four months for Metals to set up a sales force, and I stayed.

Q. Prior to your transfer to the aluminum branch of the company, what was your title and the scope of your duties with the Chemicals Division?

A. The last title I had was the manager, field sales, or sales manager, field sales, something of that nature, and my responsibilities were the operation and supervision over the field sales force, which is basically the district offices

and the entire sales force for the industrial chemical line.

Q. For how long had you held that position?

A. I had held that position under various titles, let me put it that way, since about—you should have told me you were going to ask me that; I don't know—since about 1952, something in that range.

Q. In your present position as vice president, market-
[fol. 1967] ing, what is the scope of your responsibilities?

A. Responsibility for all the sales of the chemical products in the Chemical Division.

Q. And do you have any responsibilities other than sales?

A. No.

Q. In what way is your job different from that of Mr. Johns, who is, I understand, the director of marketing?

A. Jimmy Johns has no responsibility for the agricultural chemical end of our business.

Q. Does the marketing of sodium chlorate come within your responsibility?

A. Yes.

Q. Since your return to the Chemicals Division from aluminum sales, have you had occasion to have any business dealings with Pennsalt?

A. No. I—no.

. . . . . .

[fol. 1968] Q. But can you recall now why Pennsalt was interested at the New Orleans meeting in having Olin rather than Pennsalt sell this Pennsalt chemical?

A. Yes; lack of coverage on their part in the South, in that section of the country.

Q. Was there a discussion of Pennsalt's coverage of that section of the country?

[fol. 1969] A. I don't remember.

Q. Then what is your previous answer based on?

A. Well, a discussion to me means an exchange of statements. Both of us knew as sales people that Pennsalt did not cover the Southern United States at that time.

Q. At the time of this meeting, was Pennsalt, to your knowledge, selling any chemicals in the Southeast?

A. If any, very few, very little. Now, when you say "selling," do you mean physical contact with people in

the Southeast? Not physical, but I mean physically calling upon people in the Southeast. I am trying to give you as accurate an answer as I can.

Q. In asking that question, what other kinds of selling activity would there be?

Q. Well, they might sell some in New York, which material might be shipped in the Southeast, you see.

Q. To your knowledge, did they physically call on customers in the Southeast?

A. To my knowledge at that time, no.

Q. To your knowledge, at the time did they contact [fol. 1970] customers at home office locations elsewhere for the purpose of making sales into the Southeast?

A. I think they did.

Q. And do you have any recollection of the amount of Pennsalt sales in this area flowing from that kind of sales activity?

A. No, I don't have any figure which I could give you at all.

Q. At the time of your meeting with Mr. Shanaman, was Pennsalt, in your eyes, an important company in the chemical industry?

A. Yes.

Q. Was their importance in the chemical industry confined, as you can now recall, to a particular section or sections of the country?

A. Yes, I would say the answer to that would be yes.

Q. And what were those sections?

A. The West, Northwest and what you might call the—an area bounded primarily by the Ohio and the Potomac on the south and the Mississippi on the west. That would be the rough area in which I think they were the strongest.

Q. In your capacity as manager of field sales, did you [fol. 1971] encounter any appreciable competition from Pennsalt in the Southern part of the United States?

A. I would say we encountered competition, yes. You will have to pardon me here. I am trying to remember at what time they put in the Calvert City—the Calvert City plant.

In our business, you see, Mr. Freed, geography has a certain bearing, and so, therefore, I would say our competition

with Pennsalt was far more strong in those areas where they had plants than in areas where they did not.

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[fol. 1972] Q. Since the time that you became vice president for marketing of the Chemicals Division, have you had occasion to consider, either as a policy or in any particular cases, the practice of reciprocity?

A. Would you repeat that, please? I am sorry.

Mr. Freed: Mr. Reporter.

(Question read.)

A. Well, let's take the latter part first: have I had any reason to consider particular cases of reciprocity? I would say yes, you always consider them because at times they do come up.

[fol. 1973] Now, as to the first part: have I had any reason to consider a policy in regard to reciprocity, my answer to that would be no.

Q. At the time you became vice president, were you acquainted with the existence of any Olin policy respecting reciprocity?

A. Well, to my knowledge, there has never been any written policy in regard to reciprocity.

Q. Has there been any corporate policy, written or otherwise?

A. I don't believe so.

Q. Has there been any policy that you are aware of for or against use of the practice in an appropriate situation?

Mr. Barnum: Perhaps, Mr. Freed, you would like to tell us what you regard as an appropriate situation?

Mr. Freed: By use of the term "appropriate," I meant situations where the company might consider the use of the practice to be appropriate.

A. Well, I think to answer your question as best as I can, we in the corporation—and I can only speak of course with those segments with which I have dealt—I have never—I have tried to avoid—let me put it that way [fol. 1974] —I have tried to avoid, in so far as we can, the subject or the fact of reciprocity.

In sales, reciprocity is far more often a problem than it is anything else, so therefore we are—the philosophy, let me put it this way, I said there had been no policy that I know of, but I said our philosophy had been there was to be no reference to reciprocity.

Does that give you a decent answer?

Q. Yes, sir. In other words, in so far as any affirmative use of reciprocity is concerned, your testimony is that this is something that Olin seeks to avoid and not mention?

A. Absolutely.

Q. Directing your attention, then, to the practice of reciprocity as your company is made aware of it either by competitors or by customers, what is your answer respecting the policy of Olin, if there is one?

A. You mean if a customer brings it to our attention?

Q. Yes, sir.

A. I would say in most cases we do nothing at all, because in the majority of cases there may not be any-[fol. 1975] thing we can do.

Q. Have any of the situations which have come to your attention involved the use by competitors of purchasing power in order to gain for those competitors an edge in the sale of chemicals to customers also solicited by Olin?

A. Oh, you hear rumors of this type, but I don't know of any specifically that I could point to.

Q. Have any situations been brought to your attention in which prospective customers for Olin products have demanded or made known their desire to become a supplier of Olin in any product?

A. No, I can't think of anything where that has occurred.

Q. What then are the types, if there are any types, of reciprocity practices which are brought to your attention, or which have been brought to your attention?

A. Occasionally a salesman will advise that he has been informed by a purchasing agent that he has to place business elsewhere because of other problems that are involved beyond just his straight sales-customer relationship, and they are very few in number, I would say, and for the most part there are sometimes indications that the purchasing [fol. 1976] agent is just trying to get away from giving the salesman more business.

Q. During your experience with the Chemicals Division, has the use of reciprocity by companies in the pulp and paper industry been a source of concern to Olin in its sales efforts?

A. Source of concern, no. I would say—no.

Q. If a salesman, sales official, of Olin encounters reciprocal pressure by a company in the pulp and paper industry under the terms of which the paper company says that it will purchase chemicals from Olin if Olin will purchase paper bags or some other form of product made by the company, do you have any practice or procedure for handling complaints of this character?

A. No. I would say nothing in the way of any system. It naturally would be reported, if that were the type of thing that might occur; and it is only natural in business, if you are friends with somebody, why, from a business standpoint you have a business relationship and you can assist them, why, it makes sense, but never to any greater extent than that.

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[fol. 1977] Q. Well, during your time with the Chemicals Division, has there been any situation of the character I described in my question where a company in the pulp or paper industry requested that Olin purchase some of its products as a quid pro quo or an inducement for the company to purchase Olin chemicals?

A. I would say to my knowledge the answer to that is no.

Q. And do you have any knowledge as to whether practices of this character have been a source of——

Mr. Freed: Strike that.

Q. —have come to the attention of the Chemicals Division within the last few years?

A. I cannot speak for the last few years.

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[fol. 1978] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 404

Baltimore, Maryland.

EXCERPTS FROM DEPOSITION OF DR. NORMAN O. STEIN, TAKEN ON SEPTEMBER 8, 1961

[fol. 1979] DR. NORMAN O. STEIN, a witness of lawful age, having been first duly sworn by the notary, was examined and testified as follows:

Direct examination.

By Mr. Freed:

Q. Dr. Stein, would you state your full name and address for the record?

A. My first name is Norman, my middle initial is O. Stein. I pronounce it Stein. And I live at No. 505 West University Parkway, Baltimore.

Q. Dr. Stein, what is your current position with Olin Mathieson Chemical Corporation?

A. I am Technical Assistant to the Vice-President and General Manager of the Chemicals Division.

Q. And how long have you held that position?

A. Well, I have held that position for nearly 11 years but with a succession of Vice-Presidents and General Managers.

. . . . . .

[fol. 1980] Q. When was the most recent occasion which your advice was solicited in connection with a sodium chlorate production facility?

A. The most recent occasion would be when Mr. Edward Block was the Vice-President and General Manager of the Chemicals Division.

Q. And what was the assignment which Mr. Block gave to you?

A. It was a rather narrow one. It was to look into the question of the availability and the price structure of electric power in the Tennessee Valley Authority Area.

Q. And do you recall when Mr. Block asked you to determine that information?

A. Well, I can't give you the exact date but it is I would think a couple of years ago.

Q. Can you by recourse to your records and correspondence isolate the date for us?

A. Oh, if I had my file I could tell you at once, yes. It was in mid 1959. That was the time, mid 1959.

[fol. 1981] Q. And at the time Mr. Block made the request to you, did he reveal to you anything about his own thinking or the nature of his concern about a sodium chlorate project?

A. Yes. He was not too verbose a man. He was rather inclined not to elaborate too much to his assistants but he did express his own general interest in examining very carefully the economic desirability of looking very closely at a sodium chlorate plant.

Q. Do you know whether there was any particular event which triggered Mr. Block's interest at this time?

A. I do not know of such event.

Q. Do you know whether at the time Mr. Block asked you to make this study there was any contemplation of a sodium chlorate facility other than as an Olin Mathieson plant?

A. I don't recall ever having discussed that or ever having heard Mr. Block give his opinion about how the plant that he had in mind if he had one was going to be handled.

Q. Do you recall any mention by Mr. Block at the time he asked you to look into the power question of Pennsalt Chemicals Corporation?

A. No, he didn't.

[fol. 1982] Q. And pursuant to Mr. Block's request, what action did you undertake?

A. I got in touch first of all with our Washington office

because this query concerned a quasi-government organization and they directed me to the proper official who would quickly give me the answers I wanted without having to go through too many intermediaries.

Q. And who was the officer?

A. This was a gentleman by the name of James R. Burdeshaw who is Chief of the Power Requirements Branch of the TVA and he is located at Chattanooga, Tennessee, which is their power headquarters.

Q. And did you then contact Mr. Burdeshaw?

A. Only on the telephone.

Q. And what was the conversation?

A. I just asked him whether power was available in the TVA area and what the rate schedules were and he promised to send the rate schedules to me.

Mr. Freed: I would like the reporter to mark as Plaintiff Stein's Exhibit 1, a letter to Mr. Stein, from Mr. Burdeshaw, dated July 20, 1959.

[fol. 1983] (The letter referred to above was marked Plaintiff Stein's Exhibit No. 1.)

By Mr. Freed:

Q. Is Exhibit 1 the response which Mr. Burdeshaw directed to you as a result of your conversation?

A. Yes.

Q. At the time you spoke with Mr. Burdeshaw did you indicate to him that your interest was in connection with a sodium chlorate plant?

A. Absolutely not.

Q. What was the extent to which you gave Mr. Burdeshaw an indication of your interest?

A. I just confined my inquiry narrowly to, have you power, and how much does it cost and its availability.

. . . . . .

[fol. 1984] Q. Dr. Stein, do you recall back in July of 1956 a discussion with Mr. Russell Hopkinson regarding

Olin's interest in sodium chlorate and ammonium perchlorate?

A. I vaguely do because Mr. Russell Hopkinson for a short while had the responsibility for new commercial ventures as vice-president of the corporation and I worked for him as a technical assistant.

Q. And what did Mr. Hopkinson tell you respecting Olin's interest in these two products?

A. Could you put your question, Mr. Freed, so that I clearly see what you are asking here? I don't think the question is germane because I think it might have been the other way because I might have come to him with something.

Q. Is that what happened? Did you have a chance meeting with Mr. Hopkinson or——

A. No, I used to work for Mr. Hopkinson as his Technical Assistant and so we were in daily contact with anything that interested Olin.

[fol. 1985] Q. And was it you who suggested to Mr. Hopkinson that Olin should seriously consider entering into the production of either or both of these products?

Mr. Barnum: You have a document to that effect, Mr. Freed, and he doesn't have it in his file. We furnished you with such a copy.

Mr. Freed: I would like the reporter to mark as Stein Exhibits 5, 6, 7 and 8 the following documents: No. 5 is a memorandum from Mr. Hopkinson to Dr. Stein, dated July 5, 1956.

No. 6 is a memorandum from Dr. Stein to Mr. Hopkinson, dated July 10, 1956.

No. 7 is a memorandum from Mr. Hopkinson to Mr. J. O. Logan, dated July 13, 1956.

And No. 7 is a memorandum from Mr. Logan to Mr. Hopkinson, dated July 18, 1956.

(The correspondence referred to above were marked Plaintiff Stein's Exhibits No. 5 through 8, respectively.)

By Mr. Freed:

[fols. 1986-1988] Q. I show to you these four exhibits, Dr. Stein, and ask you if they refresh your recollection concerning the manner in which, or the reasons for which, this series of memoranda on the subject of Olin's interest in ammonium perchlorate and sodium chlorate came up?

A. Well, Mr. Hopkinson had the responsibility for suggesting to the corporation areas of commercial development which should be pursued by Olin and I was his Technical Assistant so he sends a very laconic remark here like, why should not Olin make two chemicals and in this correspondence you can see that I gave him a technical answer to his questions, showed who was presently in the business and where our advantages and disadvantages would lie if we would so engage.

Q. Do you know, sir, of any event or other reason which prompted the awakening of interest at this time on Mr. Hopkinson's part in these two chemicals?

A. No. I can only surmise this is in the area of military requirement, missiles and rockets and so on and this was a live issue at that time.

Q. Do you know today, sir, what the extent of Olin's interest in ammonium perchlorate is?

[fol. 1989] A. I wouldn't have the access to that information because it is in another division. We had another division dealing with that fact, an Energy Division.

Q. So you do not know today whether Olin is interested in that chemical?

A. No.

Q. And in respect to sodium chlorate are you familiar with the laboratory work which is going on in connection with sodium chlorate cells?

A. I am aware that we have a continuous program of laboratory research in the electrochemical area in which the sodium chlorate falls.

Q. And do you have any specific knowledge in respect to Olin's purpose today in conducting sodium chlorate research in the light of its existing joint venture with Pennsalt?

A. I am afraid this question is not clear to me because in this last sentence you brought in an aspect which I am not—it is not my field or province to go into.

Q. Excluding then from my question any consideration of the Penn-Olin Company——

[fol. 1990] A. Yes.

Q. —can you tell us if you know what Olin's purpose is today in conducting further research in the area of sodium chlorate?

A. Well, I mean we are in the electrochemical field, we manufacture sodium chlorite, sodium chlorate is the precurser of that. We are heavily involved in bleaching techniques with all industries that use it such as the pulp and paper and textiles and so we have a constant and continuous interest in knowing all about sodium chlorate and keeping abreast of the technology of sodium chlorate.

Q. Are you familiar with the proposal made in the early part of 1960 that Olin enter into the production of sodium chlorate at Niagara Falls as part of its sodium chlorite production operation?

A. This matter has been brought up as long as I have been with Olin Mathieson. It has gone up and down, up and down. My personal consideration was it was considered to be too small a scale to be economically viable.

Q. And the status of that proposal today is what, sir?

[fol. 1991] A. I would say it is the same.

Mr. Barnum: Up or down?

A. Yes, down.

By Mr. Freed:

Q. Are you familiar, Dr. Stein, with the status of Olin's research and laboratory work today on the platinized titanium anode for sodium chlorate cells?

A. Not in detail. I just know that there is such kind of work going on.

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[fol. 1992] IN THE UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 405

Baltimore, Maryland.

EXCERPTS FROM DEPOSITION OF CECIL L. WILLIAMSON TAKEN ON SEPTEMBER 6, 1951

* * * * * * * *

[fol. 1993] CECIL L. WILLIAMSON, a witness of lawful age, having been first duly sworn by the Notary, was examined and testified as follows:

Direct examination.

By Mr. Copley:

Q. Would you state your name and address for the record, sir?

A. My name is C. L. Williamson. I live at 24 Indian Lane, Baltimore 10, Maryland.

Q. What is your present position with Olin Mathieson?

A. Present position is Assistant to the Vice-President and General Manager.

Q. Have you been in the recent past Manager of the [fol. 1994] Special Projects Division of Olin Mathieson Chemical Corporation?

A. My title was Manager recently. Recently my title was Manager of Special Projects but it was not a division.

Q. And so your present position as far as title is concerned is as you first stated, Assistant to the Vice-President and Associate General Manager?

A. My present position is.

* * * * * * * *

[fol. 1995] By Mr. Copley:

Q. Would you read the one paragraph into the record, sir?

A. "I am attaching a copy of the deposit slip covering the March 22nd deposit to the Penn-Olin account of $248,-

000. This represents $124,000 from Pennsalt and $124,000 from Olin, against which 124 shares of Penn-Olin stock should be issued to each company in accordance with the regular procedure. Yours very truly."

Q. Would you tell us what the reference to regular procedure refers to?

A. I would say it is a trite expression.

Q. Did the officers or directors within Olin establish a procedure whereby the issuance of stock would be accomplished?

A. They did not. Business action took place before the thing was set up. It is just that simple.

Q. Did you on your own set up a procedure whereby the stock of Penn-Olin could be issued to the parents?

A. I exercised the judgment that I saw fit in issuing the stock.

[fol. 1996] Q. Did you set up a procedure for the issuance of stock?

A. No.

Q. Who made the decision not to issue any Penn-Olin stock after the issuance of the original two shares?

A. After the——

Q. After the issuance of the initial two shares.

A. I did.

Q. When did you make that decision?

A. Sometime, I would say, late in the fourth quarter of '60.

Q. Can you give us the month in which you made the decision?

A. My recollection, if it is correct, it was in November of 1960.

Q. Did you talk to anyone in Penn-Olin?

A. Pardon me?

Q. Did you talk to anyone in Penn-Olin management about not issuing stock?

A. I am not sure. I may have but I am not sure.

Q. Did you talk to anyone in Olin management about [fol. 1997] not issuing stock?

A. Yes.

Q. With whom did you talk?

A. General Manager, Mr. Block.

Q. What was the reason for your talking to Mr. Block?

A. Because of the decision I had made. I was informing him of the conclusion I had reached and what action I had taken.

Q. In other words, the decision not to issue had been made prior to your conversation with Mr. Block?

A. In my mind, the decision was made obviously. I implement policy. I don't make it.

Q. What did Mr. Block say?

A. He was in accord with my conclusions.

Q. Had he directed you previously not to issue stock?

A. He had not.

Q. Had anyone in the Olin Mathieson or Penn-Olin directed you?

A. They had not.

Q. Did you talk to anyone besides Mr. Block about the decision not to issue stock?

[fol. 1998] A. Without a doubt, I possibly may have told, mentioned to Mr. Logan in just the course of conversation.

Q. Did you ever talk to Mr. McWhirter prior to your decision not to issue?

A. I believe that I talked to Mr. McWhirter at the time of this decision, yes.

Q. At the time or subsequent or prior to the decision?

A. At the time of, I said.

Q. What did Mr. McWhirter say?

A. Well, I don't recall any, shall we say, strong objections.

Q. What did you say to him?

A. I don't recall specifically other than the fact that until we got this—until we got the land problem squared away and in the light of this suit and so on and so forth, I couldn't see any sense of issuing stock because it had thrown the whole program in a cocked hat.

Q. Did you ever talk to Mr. O'Connell?

A. Who?

Q. Mr. O'Connell, the corporate finance officer of [fol. 1999] Olin Mathieson, about this decision?

A. Do we want to pin this down to a date?

Q. If possible.

A. What I am trying—what I am trying to get to, sure I have talked to Mr. O'Connell about that matter. As

Secretary of Penn-Olin, I gave each of the parent corporations a certification.

Q. Did you talk about a certification of the issuance of the initial two shares?

A. No, a certification as to how much had been received and the stock subsequently in due time as the financial picture was cleared would be issued.

Q. Well, prior to the decision not to issue stock, did you talk with Mr. O'Connell about that?

A. I don't recall that.

Q. Did legal counsel of either Penn-Olin or Olin give you instructions not to issue stock?

A. No.

Q. Did you discuss the problem with them?

A. Without a doubt, I mentioned it to our internal counsel.

[fol. 2000] Q. Would you elaborate on the reasons why stock was not issued? I believe you mentioned a land problem and this suit.

A. We were waiting for a complete definition of the land to be conveyed and the deed therefor and about that time—and about that time is when we got the first—if I am right, John—I think it is in late November that we got the first action as far as this suit is concerned. Consequently, it completely precludes commercial financing.

Q. By commercial financing, are you referring to loan companies and banks as opposed——

A. Not loan companies, no.

Q. Are you referring to companies which——

A. I am talking about commercial banking institutions.

Mr. Copley: Would you read back the witness' prior answer?

(The answer referred to above was read by the reporter.)

By Mr. Copley:

Q. Excluding considerations of obtaining commercial [fol. 2001] financing, what were the reasons that stock was not issued and confining yourself to the land problem.

A. Because I decided that until the land was cleared

up and the property properly conveyed, that we would just hold up on our end on issuing the stock. It was my decision and my decision alone, period.

Q. Was there any question as to the value of the land?

A. I wouldn't say so, no.

Q. Was there any question as to the amount of land to be transferred?

A. No. We talked—there was a meeting of the minds on the amount of land, just a matter of how it would be handled.

Q. Well, what did you base your decision with reference to the land problem on? What I am getting at is, did you hold up your decision merely because the papers on the land had not been signed?

A. No. That was not the total reason or the—yes, the total reason. In other words, the land wasn't squared away and as I said before, this action I believe started in [fol. 2002] late November or sometime in December of '60 and at that time, I think there was all of $75,000 apiece put in.

[fol. 2003] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 406

Baltimore, Maryland.

EXCERPTS FROM DEPOSITION OF DR. BRUNO H. WOJCIK TAKEN ON JULY 26, 1961

* * * * * * *

[fol. 2004] Direct examination.

By Mr. Freed:

Q. Dr. Wojcik, would you state your name and address for the record?

[fol. 2005] A. My name is Bruno H. Wojcik, the address is 1018 Rolandvue Road, Ruxton 4, Maryland. That Rolandvue is spelled R-o-l-a-n-d-v-u-e, all one word.

Q. What is your present position with the defendant, Olin Mathieson Chemical Corporation?

A. Just recently I have been given the title of Scientific Adviser.

Q. When did you receive that title and what was your immediately preceding position with the Company?

A. This title was given to me within the last approximately two weeks. Previous to that, I was acting as Manager of Quality Control.

Q. Your position as Manager was as a member of the Chemicals Division of Olin?

A. As acting Manager, yes.

Q. Dr. Wojcik, how long have you been employed by Olin or its predecessor company?

A. Approximately eleven years.

Q. And can you state when and in what position you first came to Olin or its predecessor?

A. I became an employee of Mathieson Chemical Cor-
[fol. 2006] poration in September of 1950 as Associate Director of Petro-Chemical research.

Q. Can you tell us when you first performed any duties in Mathieson in connection with sodium chlorate?

A. Oh, approximately six, seven years ago.

Q. And under what circumstances did that come about?

A. A desire to evaluate our position for the production of sodium chlorate.

Q. Can you fix any date on which you first took an interest in your employment with Mathieson in the sodium chlorate field?

A. I can't recall for sure, but I would say it was between 1954 and 1955.

Q. At that time what was your position with the Company?

A. I was then Associate Director, Chemical Research.

Q. Where were you stationed at that time?

A. Niagara Falls, New York.

Q. When your duties in connection with sodium chlorate first began, did you acquaint yourself with the history of Olin's interest in this chemical?

[fol. 2007] A. In a cursory manner, yes.

Q. And can you tell us what that history was?

A. I knew that Mathieson was interested in, one, producing sodium chlorate and, two, promoting the use of Mathieson's process for the conversion of sodium chlorite to chlorine dioxide for pulp paper bleaching as well as other uses.

Q. What efforts had been made prior to the time that you assumed sodium chlorate duties to explore the possible production of sodium chlorate as you recall the history you acquainted yourself with?

A. There were a few literature studies made as to the potential outlets and growth of sodium chlorate.

Q. Had Olin prior to this time done any development work in the production of sodium chlorate?

A. I do not recall this.

Q. Beginning with your own sodium chlorate duties, beginning in 1954 and 1955, can you tell us what Olin's efforts were in the field of sodium chlorate development or production?

A. As I stated previously, we constantly tried to keep abreast of the literature and periodically we would make [fol. 2008] evaluations as to the potential growth of sodium chlorate and then we would also submit to management proposals for research studies involving production of sodium chlorate.

Q. Were the production studies initiated by you or were they initiated as a result of the order of someone else in the Company?

A. I certainly was in a position to initiate them and I cannot answer whether in each instance I did, myself, or with the help of somebody else.

Q. In so far as the first efforts to develop a sodium chlorate process are concerned, is it your recollection that you initiated those efforts or those efforts were a result of the request of someone else in the Company?

A. Perhaps both.

Q. Who else in the Company was interested or who might have consulted with you at that time about the advisability of this development work on sodium chlorate?

A. Certainly some of my associates who had a good background in electrochemistry and could be technical service people or even management, itself.

Q. In each of the three classes you have just mentioned, [fol. 2009] can you tell us who the leading personalities in Olin were among your associates, among technical service people and among management who expressed an interest in developing Olin solium chlorate capabilities?

A. I am not sure that I can recall and if I have to answer it more positively, then I would have to put myself on a spot. Every so often we would review our research activities and realize we had a potential interest in the manufacture of sodium chlorate and I would ask some of my associates and others to furnish me information which would help in building a case to present to management that we ought to do some work on the development of a process for the manufacture of sodium chlorate.

Q. And did you build a case?

A. Yes, at one time we had learned through literature of a new development on a new type of an anode, a platinized titanium anode and after an economic evaluation I figured we had a case, a research project.

Q. When did the development of that anode come to your attention?

A. I am not certain of the date but I am guessing now [fol. 2010] somewhere between '55 and '56 or it could be '57. '56-'57.

Q. When you completed your work on the anode, did you make a recommendation to management?

A. Yes, I did. I recommended to management that we build a prototype cell on which to confirm our laboratory findings.

Q. And was such a prototype cell built?

A. No, it wasn't.

Q. Has it ever been built?

Mr. Barnum: By Mathieson?

Q. By Olin Mathieson Chemical Corporation.

A. No, not to my knowledge.

. . . . . .

[fol. 2011] By Mr. Freed:

Q. Dr. Wojcik, during the period of 1957 to 1960, did your duties include all research work that was going on in the soduim chlorate yield by Olin?

A. My responsibilities on sodium chlorate process development ended about 1960, sometime in 1960.

Q. Can you recall under what circumstances those responsibilities in the research of sodium chlorate ended?

A. Yes, about that time there was a reorganization.

Q. Are you referring now, sir, to the reorganization that took place in 1960 which led to your appointment as being in charge of Quality Control for industrial chemicals?

[fol. 2012] A. Quality Control and Director of Inorganic Research. I no longer had the responsibility for the development phase of the work pertaining to sodium chlorate.

. . . . . .

[fol. 2013] Q. Dr. Wojcik, at the time Olin made the decision in late 1959 or early 1960 to embark on the sodium chlorate project with Pennsalt, did you participate in any of the discussions with Mr. Logan or Mr. Block or any of the other managerial personnel of the Company with respect to that prospective project?

A. No, I have not.

Q. Was your opinion ever asked by the management of Olin on the question of the relative desirability of Olin's

proceeding jointly with Pennsalt or proceeding in some other manner to enter the sodium chlorate business?

[fol. 2014] A. No, it has not been asked.

Q. In preparation of your testimony today, sir, have you reviewed the series of Electrochemical Survey Reports by Olin in the sodium chlorate field going back to 1955?

A. I have reviewed some.

. . . . . .

[fol. 2015] Mr. Freed: I might state for the record that [fol. 2016] the copy of report 501 which was furnished to the Government has a stamp in the upper right hand corner which reads B. H. Wojcik, October 27, 1955, Niagara Falls.

On page 2, the top of page 2 of that report, is the statement, "The lower figure for this estimate is based on the fact that Olin Mathieson Chemical Corporation will build the sodium chlorate unit at the site of an existing plant."

Can you enlighten us, sir, on any of the background for that statement in terms of discussions at which you were a party or in which that came to your attention regarding Olin's intentions to build a sodium chlorate plant at the site of another of its plants?

A. The only reason that we would give serious consideration to building a sodium chlorate plant at the site of one of our existing plants would be one of economy where we had the services, where we had the salt available, where we had experienced people in the electrochemical background.

Q. Were factors such as you have just indicated discussed within Olin prior to the time that this report was written, to your knowledge?

[fol. 2017] A. To the best of my knowledge, this could well be so. Whenever we consider putting up a new facility for the production of a new chemical, we always take into account the location based on existing plants and any savings that may result from putting up a unit.

Q. Can you recall at the time of this report what the state of thinking was in your particular branch of the Company with regard to Olin's entry into the production of sodium chlorate as refreshed by this report?

A. It was no more than the need for giving serious consideration to the production of sodium chlorate based on

the fact that we were already buying and using a fair quantity for the production of sodium chlorite and that we were promoting the Mathieson process of the generation of chlorine dioxide which uses sodium chlorate.

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[fol 2018] Q. Can you recall in general during this period of 1955 whether you were aware of any instructions or dispositions on the part of Mr. Logan to advance Olin's interest in the sodium chlorate field?

[fol. 2019] A. On various occasions the subject was brought up for discussions. I can't tell you whether it was by Mr. Logan or myself. The facts are that I constantly saw a need to evaluate carefully our entering the production of sodium chlorate for reasons already cited and whenever I saw anything in literature that would lead me—had a chance of production sodium chlorate, I would not hesitate to call it to Mr. Logan's attention or to any of my associates.

Q. And do you recall during this period of 1955, what Mr. Logan's reaction was to your suggestion and your proposal about producing sodium chlorate?

A. He was always of an encouraging nature but he warned us that we would have to have our economics picture well in hand to be able to sell management the possibility of our producing sodium chlorate.

Q. Dr. Wojcik, would it be a fair characterization of the series of reports in the sodium chlorate field which were put out by the Research and Development Department that these reports were an effort by your department to determine the economic feasibility of Olin's entry into sodium chlorate production?

[fol. 2020] A. Basically, that is correct.

Q. Are there any respects in which it isn't correct that you can point to? Are there any qualifications which you would like to make to the general statement which I made?

A. May I have the question read back to me, please?

(The question referred to above was read by the Reporter.)

A. No, there wasn't any.

Q. In your own view of these Electrochemical Survey

Reports did you and your Research and Development Department ever demonstrate to the satisfaction of you and your own department the feasibility, economic feasibility, of Olin's entry into the production of sodium chlorate?

A. At the laboratory stage, yes, and I would like to qualify that by saying that most of our studies, and here I am referring to economic studies, were based primarily on what was available in literature plus what little bit we did in the laboratory.

Q. To what extent were your studies viewed as a rule deficient in respects which would be necessary to consider before an over-all determination of economic desirability [fol. 2021] could be made?

A. No practical experience on a large scale or through a pilot plant unit.

Q. What steps would have been necessary to take to establish a pilot plant unit?

A. We would have to prepare a program, detailed in every respect, including costs and submit that to management for approval.

Q. Was any such recommendation or report ever made?

A. I cannot recall offhand.

Q. Do you recall whether you ever urged Mr. Logan or other members of management to embark on a pilot plant operation?

A. It's quite possible that I had discussed the matter with Mr. Logan as well as perhaps others.

Q. And do you know why management decided against a pilot plant operation during this period?

A. Basically because our economic studies did not encourage management to go through with whatever we had proposed simply because even whatever we came up with we could not be certain that this was so since most of our [fol. 2022] information was based on literature studies. I am referring to such things as yields, corrosion of the equipment, consumption of power, the consumption of the carbon anodes. If you check the literature you will see that they specify ranges there. One concern will say so-and-so and another one will say thus-and-so and we would use the best information that was available at the time or even averages.

Q. Were these doubts, were these open questions that you

have pointed to, unique in your experience in the chemical field in so far as a company's exploration of new products or new chemicals is concerned?

A. Not at all, sir, this is quite common.

Q. Were there any unusual factors about sodium chlorate that posed more of a barrier with your experience in Olin with them, posed more of a barrier to Olin's further exploration in pilot planting than most other chemicals that you have had experience with?

A. In general, I would say no, but there were a few specific items that bothered us no end, power requirements, carbon anode consumption, corrosion.

Q. Are power requirements an important element in [fol. 2023] your consideration of where to locate a chlorine or caustic plant?

A. Yes, indeed.

Q. Are corrosion problems unusual in your efforts to develop new chemicals and new compounds?

A. This is one factor we are always concerned with and it varies depending on what you are going to produce.

Q. Dr. Wojcik, do you recall in the middle of '56 receiving a memorandum from Mr. Walter Northgraves concerning prospective sodium chlorate customers in the pulp and paper industry?

A. Offhand, I do not recall but most likely I had received it.

Q. I would like the Reporter to make this Plaintiff's Wojcik Exhibit 1 and for the record this is a memorandum from W.W.N. to Dr. B. H. Wojcik dated May 8, 1956, entitled sodium chlorate—Market Survey—Pulp Industry. This document has been given the documentation Olin C 113.

(Plaintiff Wojcik Exhibit No. 1 was marked for identification.)

By Mr. Freed:

[fol. 2024] Q. Dr. Wojcik, as a result of your reading of Plaintiff's Exhibit 1, do you recall the circumstances which led Mr. Northgraves to send this particular memorandum to you in 1956, and I direct the attention prin-

cipally to Mr. Northgraves' statement that we could probably locate a plant to reach all mills listed.

A. I don't recall the exact extent as to why that report was written but it was certainly within my province to ask for such a report knowing that we were giving serious consideration to the production of soduim chlorate.

Q. Was it your best recollection that you or someone in your behalf had asked Mr. Northgraves to determine the possible market for a sodium chlorate plant?

A. It was most likely I that asked him.

Q. Do you recall what use, if any, was made of the information transmitted to you by Mr. Northgraves particularly in line of the fact that copies of this memorandum were also sent to Mr. Logan and Mr. L. E. Russell?

A. In the first case it is quite common to inform people in other areas of how our thinking was going and if I recall correctly, Russell at that time was in charge of [fol. 2025] market developments so it would be only natural for him to get a copy. On the other hand, Mr. Logan quite often got copies of our surveys just for general information. That particular report helped me to establish the size of a plant that we ought to think about putting up and as I recall the figure of 40 tons per day was one that we used in some of our evaluation studies because of what was noted in Mr. Northgraves' report.

Q. On the basis of 40 tons a day, how would you convert that figure to an annual capacity figure for a sodium chlorate plant?

A. We usually multiply that figure by 350 days.

Q. Then is it correct, sir, that on the basis of Mr. Northgraves' report you geared your thinking to a plant in the range of 14,000 tons per year?

A. That sounds correct to me.

Q. Following receipt of Mr. Northgraves' report, do you recall any conversation with Mr. Logan or Mr. Russell concerning further efforts or efforts in a different direction to explore Olin's potentiality in the sodium chlorate field?

A. I do not recall.

[fol. 2026] Q. There is a handwritten note, on the bottom of this document, which came from Mr. Logan's file which contains the words, "Review for Brunswick and other location." Does your examination of the notes made on

that document in any way refresh your recollection as to conversations you may have had with Mr. Logan or instructions that may have been given concerning the direction of Olin's efforts following that report?

A. No, it does not and I would like to add that quite often after Mr. Logan sees a report such as this, he may write across it as noted here without necessarily discussing the subject matter with anyone.

Q. But it is your testimony that whether he discussed it with anyone else there was no discussion that you recall concerning a new direction in your sodium chlorate exploration efforts following Mr. Northgraves' report?

A. That's correct as far as I can recall.

Q. In what way did this report of Mr. Northgraves influence your subsequent activities in the Research and Development Department aside from advising a figure of 40 tons per day as the likely capacity of a plant.

[fol. 2027] A. Only in so far as it gave us some idea as to the size of the unit that we should put up and on which to make an economic evaluation and to be mindful of the need to watch the sodium chlorate production.

Q. Do you recall whether the figures furnished by Mr. Northgraves raised or lowered your sights as far as the size of an Olin sodium chlorate plant were concerned?

A. I don't remember whether prior to that report I had any idea of the size of a plant we should put up or we should consider putting up.

Q. Then this report filled a gap in Olin's prior knowledge as to the right demand for sodium chlorate, is that correct?

A. Not necessarily demand but it certainly showed us the size of the unit that we, ourselves, ought to consider putting up.

Q. The information furnished by Mr. Northgraves indicated a possible demand for sodium chlorate in the amount of 20,750 tons in 1956, increasing it to 45,000 tons by 1959. Can you tell us how you calculated the percentage, the proportion of its capacity which Olin was likely to receive [fol. 2028] on the basis of these figures.

A. As a rule of thumb, we use 10 percent of the market.

Q. As I would read this document, 10 per cent of the market would be either 2,000 tons in 1956 or 4,500 tons in

1959. I wonder if your review of that document would enlighten us a little more as to where the 40 tons a day figure came from, the basis on which it was computed.

A. In the first case, one never builds a plant just to meet what he thinks is going to be the demand. You always allow for possible growth. In the second case we have to take into consideration the area where you are going to locate your plant. If there is a higher demand for that product in that area, chances are good that you may get more than the 10 per cent figure that I mentioned of the total demand for the product.

Q. The figure which you have mentioned, approximately 14,000 tons per year would have been one-third of the demand expected in 1959, three years after this survey. Was a one-third figure used or can you recall how, what the thinking process was, in Olin as you were familiar with it [fol. 2029] which led to the choice of the 14,000 ton plant against the industry demand shown by Mr. Northgraves' report?

A. Yes, I believe there were some extenuating circumstances that led us to consider putting up a larger unit. We were familiar with the increased activities in the production of perchlorates which are made from sodium chlorate and it was our feeling then that we ought to provide some excess capacity to have available for perchlorate manufacture for some future time.

[fol. 2030] Q. Dr. Wojcik, were there any other extenuating circumstances apart from the perchlorate process?

A. No, there were not.

Q. Dr. Wojcik, I would like to direct your attention now to a memorandum written on November 26, 1956 by W. C. Gardiner to you, entitled, U.S. Chlorate Patents Now In Force, and ask you first whether you recall this patent report by Dr. Gardiner?

A. I believe I do.

Q. Can you enlighten us as to the patent problems, if any, faced by Olin in considering sodium chlorate production?

A. As a rule, we never undertake the production of any new product without examining the patent art to make sure we are not infringing on any existing patents.

Q. Then, the purpose of this report was to clear any

patent problems that might exist before Olin would embark more seriously on sodium chlorate production, is that correct?

A. I think that is so; I am not certain though.

Q. Do you recall, whether as a result of the patent studies which were made, Olin encountered any significant patent [fol. 2031] barriers to its sodium chlorate exploration activities?

A. No, sir, I do not recall any serious patent barriers.

Q. If there had been any barriers, would you likely know about them?

A. Quite likely.

Q. Then, may we conclude, patents were never a problem or patents turned out not to be a problem in Olin's studies and efforts in the direction of sodium chlorate production?

Mr. Barnum: Excuse me; you may draw any conclusion you wish.

Mr. Freed: I agree, Mr. Barnum; Dr. Wojcik may draw any conclusion.

A. We did not conclude that on the basis of a new development that I have mentioned previously, platinized titanium anode development which we were led to believe ICI may have some patents in that area; please understand, this is something new and does not necessarily refer to the usual method of production for sodium chlorate where carbon anodes are used.

Q. In the production of sodium chlorate today, are [fol. 2032] platinized anodes used or carbon anodes being used by all producers, to your knowledge?

A. To the best of my knowledge, I do not know whether any platinized titanium anodes are being used.

Q. Do you know whether Olin in its own activities or Penn-Olin in the design of its production plans are using platinized anodes?

A. To the best of my knowledge, I do not know.

Q. You do not know either whether Olin has or is using them or whether Penn-Olin would use them?

A. If you are referring to using them for the production of sodium chlorate, the answer is no, they are not used at the present time; as far as Penn-Olin is concerned, I do not know and I would doubt very much that plans have been made for the use of platinized titanium anodes.

Q. To your knowledge, is the availability of the platinized anodes limited because of the patent problem or is it another problem or other factors which have caused their nonuse?

A. I do not think the patent limitations are as serious as the lack of complete knowledge regarding these platinized [fol. 2033] anodes.

Q. Regarding the manner in which they will work and whether they will be reliable?

A. Yes, yes, that is correct.

Q. Dr. Wojcik, I would next direct your attention to Electrochemical Survey Report H-35.502, dated July 26, 1956, entitled, Production of Sodium Chlorate, and this particular document is marked Olin C-110a, and on the face of the report, distribution is shown to Mr. Logan, yourself and a group of other people in the company and I ask you whether you are familiar with the contents of that report?

A. I certainly was at one time.

Q. Have you reviewed it in connection with preparations for your testimony today?

A. In a cursory manner, yes.

Q. Do you recall the circumstances under which this report 502 was undertaken?

A. Not exactly but I might have requested that that be made.

Q. Following, as it does, by two months or so, Mr. Northgraves' report previously referred to as Plaintiff's Exhibit [fol. 2034] No. 1, do you recall whether there was any connection between Mr. Northgraves' report and the instructions to proceed to prepare this report?

A. I don't recall offhand but quite likely there were connections; in other words, I was trying to get first of all an idea of the size of the plant we might build and secondly, the types of units that are being used for the production of sodium chlorate cells in particular.

Q. When you referred to, cells, in particular, is the sodium chlorate cell the key to the whole production process, at least from a technological and financial point of view?

A. Basically, this is correct.

Q. I wonder if you can explain for the record and for the use of laymen just what a sodium chlorate cell is and what the technological problem has been in your experience with the development work on sodium chlorate cells?

A. A sodium chlorate cell is an apparatus in which so-

dium chloride is electrochemically converted to sodium chlorate—excuse me—I am sorry, I am lost; can I have the question reread?

(Whereupon, the pending question and answer referred [fol. 2035] to above was reread by the reporter.)

A. The problems confronting us was a limited knowledge of the chlorate cell wherein I pointed out previously the life of the cell based on corrosion, the carbon anode consumption; I ought to add also, yields of desired product.

Q. And, can you state for us what Olin's objective technologically speaking was in its development efforts, what did it know and what was it seeking to learn or develop?

A. From a practical point of view, we knew very little about chlorate cells and, I repeat, most of our information came from the literature and we were trying to pinpoint the cell which in our opinion would give us the best yield, the best life, less maintenance costs and so on which to start our laboratory studies.

Mr. Freed: I wonder if you'd read that answer back to me.

(Whereupon, the pending answer referred to above was read by the reporter.)

By Mr. Freed:

[fol. 2036] Q. At the time you left this branch of Olin's activities and you left your responsibilities for sodium chlorate cell development, how far had that development process proceeded?

A. We had actually constructed and tested the small laboratory cell principally for use with the platinized titanium anodes.

Q. And, what was the performance of that cell in terms of yield and corrosion and the other important factors that you were looking for?

A. I do not recall in detail but in general, they were good enough for us to want to explore it further.

Q. And what would further exploration have involved, what would the next step have been?

A. The construction of a prototype cell.

Q. And who would be—would a prototype cell differ from a laboratory cell that you had constructed?

A. A prototype cell in my opinion is a unit large enough for commercial use; in other words, a full scale cell that we could put right into a plant.

Q. Has Olin proceeded with a prototype cell?

[fol. 2037] A. Olin itself has not proceeded with the construction of a prototype cell; we did however seek help from others in the construction of such a unit.

Q. And by, others, who do you have in mind?

A. Vickers-Krebs, Montreal, Quebec.

Q. And, did Olin enter into arrangements with Vickers for the construction of the prototype cell?

A. No, sir, we never actually finalized any arrangement or agreement with Vickers-Krebs.

Q. Can you tell us why, to your knowledge, you did not, Olin did not proceed to finalize those arrangements?

A. I am not certain that I know the exact reason; we had some difficulty trying to come up with an agreement that could be acceptable to both parties.

Q. Were there any other reasons?

A. It seems to me that at the state where we were still pursuing a connection with Vickers-Krebs, I was told that this was no longer possible because decisions were made to form Penn-Olin.

Q. And who told you of that decision?

A. To the best of my recollection, it was the late Mr.

[fol. 2038] E. Block.

Q. And, do you recall when Mr. Block gave you that information?

A. I am not certain but it might have been sometime in late '59.

Q. Do you recall where this discussion with Mr. Block took place?

A. I do.

Q. Where was it?

A. In his office.

Q. In Baltimore?

A. Yes.

Q. Was anyone else present during this discussion?

A. I don't recall anyone else being present.

Q. Can you tell us about how long the discussion lasted?

A. On this specific subject?

Q. Yes, sir.

A. A few minutes.

Q. Can you tell us what Mr. Block told you about the decision which had been made?

[fol. 2039] A. All he told me at the time was that a decision had been made to form Penn-Olin and we would no longer pursue any joint venture on the development of a cell containing platinized titanium anodes with Vickers-Krebs.

Q. Why was this particular limitation on Olin's activities directed? Why did Mr.—do you recall whether Mr. Block said anything why he wanted that particular project terminated?

A. I do not recall any specific reasons given for the determination—termination by Olin.

Q. With the exception of a Vickers-Krebs arrangement and platinized titanium anodes, did Mr. Block say anything with respect to the other development work then going on by Olin in the sodium chlorate field?

A. No. I do not recall.

Q. Was there any other development work then going on?

A. No; when you speak of development work, you of course are referring to the development of a sodium chlorate process, there was not to my knowldege anything else going on in the development area.

Q. Did you—do you recall asking Mr. Block why the [fol. 2040] Penn-Olin decision had been made?

A. No, sir, I did not ask him why.

Q. Do you recall him saying anything about why Olin had chosen to proceed with Pennsalt rather than by any other route?

A. If you had had the privilege of knowing Mr. Block, you would have realized he seldom gave you reasons why certain decisions were made.

* * * * * * *

[fol. 2041] By Mr. Freed:

Q. At any time, subsequent to your conversation with Mr. Block, do you recall hearing or reading of the reasons why Olin made the decision which Mr. Block delivered to you?

A. I vaguely recall seeing someone; the fact that—that

timing was such, we had to go ahead on sodium chlorate production now or we may lose a position in the market, in a growing market; if we had proceeded with our development that we had in mind with Vickers-Krebs, it would have taken perhaps as much as two years before we could tell management that we had a cell capable of making chlorate with good yields and economically.

* * * * * * *

Q. In your own view, at that time, in late '59, when you [fol. 2042] had the conversation with Mr. Block, what was your opinion of Olin's ability, capability to engineer and construct a usable, a commercial sodium chlorate cell?

A. What yardstick would you use, regarding our capability? If life depended on it, we could have made sodium chlorate but whether we would make money doing it that was something else.

Q. Well, what was your own view with regard to the status of Olin's development work as being close to or far from achieving a successful cell?

A. It looked promising.

Q. To your knowledge, were there any people in the Olin organization who disagreed with your view that it looked promising?

A. No; there were no people that disagreed but there were a number that felt we did not have enough information on which to make a sound decision.

Q. Who were the people who helped you?

A. Mr. Block especially.

Q. During this period of time, was Vickers-Krebs already engaged elsewhere in the production of sodium chlorate?

[fol. 2043] A. I do not think Vickers-Krebs was saying—was involved in the production of sodium chlorate but they had put up a number of sodium chlorate plants based on information that they would obtain from Krebs in France.

Q. From your knowledge of the sodium chlorate business, and technology, are the—at this time in late '59, were the sodium chlorate plants which had been constructed by Vickers-Krebs successful commercial operations?

A. I don't know for sure but I would imagine they were.

Q. Did Vickers-Krebs enjoy a good reputation in the

sodium chlorate industry as a builder of commercially successful, of commercially sound plants?

A. In our opinion, yes.

Q. Can you tell us then why the view was held by people in the Olin organization that a substantial additional period of time would be required to develop a sodium chlorate cell with Vickers-Krebs when Vickers was already in the business of constructing going plants?

A. Through the use of platinized anodes, our evaluation studies show that there was an excellent chance of our [fol. 2044] producing sodium chlorate at a cost lower than whatever the literature studies revealed and it was with this end in view that Research and Development felt we should proceed with the studies involving the platinized anodes.

Q. Your aim then was to come up with a cheaper method than was then in existence for producing sodium chlorate?

A. That is correct.

Q. To your knowledge, does the facility which is now under construction for Penn-Olin embody such a cell, such cost-reducing factors?

A. I know nothing about what was decided regarding the cell and the installation and so on and so forth.

Q. Would Mr. J. L. Wood be familiar with this matter?

A. It's possible.

Q. Who, to your knowledge in the Olin organization would have the best information about the technology adopted in the Penn-Olin plant?

A. Perhaps Mr. Wood.

Mr. Freed: Off the record.

(Discussion off the record.)

By Mr. Freed:

Q. Returning, Dr. Wojcik, to the report we referred [fol. 2045] to earlier as Electrochemical Survey Report 502 on July 26, 1956, the first paragraph of the summary on page one states that the general position of four U.S. sodium chlorate producers is discussed with special emphasis on Pennsylvania Salt Manufacturing Company. Do you recall now why special emphasis was given to

Pennsalt among the various producers in the preparation of this?

A. I do not recall exactly but if my memory serves me right, it could have been because Pennsalt put up the newest installation for producing sodium chlorate and we would of course want to look at that pretty carefully to see if they had done anything unusual.

Q. In the last paragraph of this summary, on page one, there are in effect two recommendations, the first is that know-how be purchased from Pennsalt, Electro Reduction or other producers if immediate construction of a plant is required; the alternative stated here is that if time for development is permitted, an evaluation of three new cell designs should continue in detail, costs, estimate of chlorate recovery plant should be made. Do you recall the action taken by Olin when this report and its recommenda-
[fol. 2046] tions were filed?

A. I do not recall any specific action taken because of this report but it seems to me that somewhat later, and I can't name the date, we read about these platinum-coated anodes and we felt we ought to take a quick look at those before any work was done, in trying to come up with a firm recommendation as to which particular know-how we should reach for.

Q. At least, in terms of the premises of these alternative recommendations, namely if immediate construction of a plant is required or if time for development is permitted, what was the prevailing feeling in the Olin organization as you knew it about quick construction as against Olin's own development?

A. We envisioned a demand for sodium chlorate and we heard that Oldbury and Hooker were going to merge; the feeling was that if we were going to do something on sodium chlorate, this was a good time to do it.

Q. And, when you say this was a good time to do it, do you mean to proceed immediately to construct a plant or to proceed to develop through Olin's own research depart-
[fol. 2047] ment a cell of its own?

A. Having a background in electrochemistry for the production of caustic and chlorine, I naturally would lean toward doing something on our own.

Q. And, at the time this report was filed in July 1956,

your own feeling in this regard about Olin's development of a chlorate cell prevailed your point of view about attempting to develop this through Olin's internal organization, was the prevailing feeling at this time, is that correct?

A. I am a little confused; may I have that question read back, please?

(Whereupon, the pending question referred to above was read by the reporter.)

A. Generally speaking, we felt we had know-how to develop a good chlorate cell if given time to do so.

Q. At this time, to your knowledge, was Mr. Block interested and in agreement with this decision or was this simply a lower level determination by the research-development department on its own?

[fol. 2048] A. Pretty much a decision by the research department; Mr. Block was not at that time in charge of our division.

Q. Was Mr. Logan then the top man?

A. I am not certain but he could have been; I hesitate, because Mr. — it was Mr. Drummond who was in the picture at that time; I don't recall whether he was still in or on his way out because for a while Mr. Logan was in charge of the division.

Q. Do you recall whether Mr. Drummond or Mr. Logan believed at this time in 1956 that Olin should proceed on its own to develop a sodium chlorate cell?

A. You are referring specifically to the development of a sodium chlorate cell?

Q. I am, sir, but I'm only doing so on the premise which I had understood to be established by your testimony that this was the key to Olin's entry into sodium chlorate production; if that premise is wrong, I would appreciate it if you would correct the record.

A. The premise is correct; I can say that Mr. Logan and Mr. Drummond always encouraged us to do a lot of thinking about sodium chlorate and the development of a good [fol. 2049] practical cell but our research staff was never large enough in order to do something about it at that particular time.

Q. Were additional funds for a larger research staff requested or discussed at this time?

A. Oh, yes; this is something I always requested, yes.

Q. With particular reference to sodium chlorate, can you tell us why a decision was made not to increase the size of the technical staff to speed up sodium chlorate cell development?

A. Yes; principally, because we could never show a good return on the production of soduim chlorate and because we had no practical experience in that line.

Q. When you referred to, no practical experience, can you tell us how a chemical company such as Olin could achieve practical experience other than through the means that you were then exploring?

A. I think it's obvious from the records, you can always buy it.

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[fol. 2050] By Mr. Freed:

Q. But, do you recall whether the chemical process referred to in Report 503 was in fact compared with the process in Report 506 for producing sodium chlorate from chlorine and soda ash? In other words, was the recommendation of this report carried on as part of your overall effort to achieve a sodium chlorate production?

A. I believe it was.

Q. Dr. Wojcik, I would like next to address your attention to a memorandum from A. J. Holmes to W. C. Gardiner, dated March 6, 1957, showing copies to you and Mr. Nicolaisen; this document contains the designation, Olin D-264; are you familiar with that particular document?

A. I am, sir

Q. In the last paragraph, Mr. Holmes states that it would be possible to enter the chlorate field in a relatively short time if the chemical plant were built immediately and existing caustic and chlorine were used in the operation of this plant; and, he continues, "At least a year would be required to obtain the necessary rectifiers. Chlorine and [fol. 2051] caustic channeled to the chlorate plant could possibly be replaced by Huntsville material." Can you recall what action was taken by you or Dr. Gardiner as a

result of this recommendation or this conclusion in Mr. Holmes' memorandum?

A. We did not pursue the matter further in any serious vein for two reasons; in the first case, we were not sure of the chemistry involved, even though we had undoubtedly done a little—some laboratory work and also there was a serious question in our minds concerning the economics.

* * * * * * *

[fol. 2052] Q. Can you tell us the relationship between chlorine or caustic facilities on the one hand and a sodium chlorate plant on the other in terms of any savings or advantages to a company in combining the two types of operations?

A. Production of sodium chlorate, like caustic and chlorine is an electrochemical process so that wherever you produce caustic and chlorine, you would have a knowledge of the type of processing involved, people with background in that work, some understanding of the electrical equipment as well as the handling of certain raw material such as sodium chloride.

Q. And, the three facilities which are mentioned in this report did have some of those physical advantages that would be usable and would be cost savers in connection with the sodium chlorate plant?

A. Yes, I would think so.

Q. On page three of this same report, the statement is made that, quote Investment and operating costs have been received from Pechiney of France and have been compared to the above figures, unquote. Do you have personal knowledge of negotiations or correspondence with this French company?

[fol. 2053] A. I sure do; I started them.

Q. Can you give us the background of the discussions or relations that Olin entered into with—Pechiney, is that correct?

A. Pechiney, yes. I was instrumental in asking our Mr. R. S. Fodor of the International Division to try to obtain information on sodium chlorate production from any European concern that was willing to discuss this subject matter with us; Pechiney came into the picture through our European contacts.

Q. Did Olin Mathieson International contact Pechiney for the purpose of trying to negotiate the acquisition of information from the company for use in your sodium chlorate development process?

A. I believe this is so.

Q. Under whose instructions or overall direction were the contacts with foreign sodium chlorate companies made?

A. I am not certain but I believe it was Mr. Block who asked us to get any and all information from foreign countries on the production of sodium chlorate.

Q. Do you know why the search for sodium chlorate [fol. 2054] information was confined at this time to foreign companies?

A. I believe it was principally on the basis that we were not sure whether this would be a profitable item for us to produce and rather than stir up commotion in the United States, the feeling was that we might learn enough about the production of chlorate, especially from the cost angle to make a decision as to whether we wanted to go ahead with it or not.

Q. What kind of commotion might have been stirred up by requesting this same information from the then existing domestic producers?

A. Of the usual kind; if you are told that certain companies are seriously thinking of producing sodium chlorate and if you are already producing it yourself, the chances are that—that you want to up your production and let the industry know as a whole that you are in a position to supply the demand.

Q. In other words, by proceeding solely through foreign sources, Olin would avoid the risk of pushing other domestic companies into increasing their own production?

A. That's possible.

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[fol. 2055] Q. On page four of Report No. 504, the objective of the report is stated as being, quote To determine realistic production and investment costs for a 40-ton per day sodium chlorate plant to be located at one of Olin Mathieson's Southern electrochemical plants, unquote. Was this decision, if a decision was made to concentrate Olin's sodium chlorate studies on a Southern electrochemical

plant of the company made by you or was it—was this the result of some higher level decision within the company insofar as the potential location of a sodium chlorate plant?

A. It was only natural for the people in research and development, including myself, to consider putting up a sodium chlorate plant in the areas where we already had [fol. 2056] operations going and especially since they were in places where a large quantity of sodium chlorate was being consumed by the paper mills for the generation of chlorine dioxide.

Q. The sole recommendation of Report 504 is given on page eight as being that, quote It is recommended that consideration be given to chemical production of sodium chlorate before making a decision on the method of manufacture, unquote. Could you give us a brief summary again in layman's—in language for the layman on the difference between chemical and alternative means of production?

A. The word chemical production is used rather loosely there; I say that for the simple reason, in order to produce chlorate chemically at some stage of the game, an electrochemical operation was involved; you took sodium chloride, electrolyzed it, converted it to caustic and chlorine; then, you take caustic and chlorine and react them together to form an intermediate product, sodium hyperchlorite which, on heating, is chemically converted to some salt, sodium chloride and sodium chlorate; when you go over to the direct generation of sodium chlorate from salt, you elec- [fol. 2057] trolyze salt in a cell to the point where it does not produce free caustic and chlorine but sodium chlorate.

Q. After the research and development effort on chemical production as you have described, what were your conclusions with respect to the feasibility and desirability of the exact method of producing sodium chlorate?

A. In the first place, we were not too sure that the chemical reactions would proceed in the plant as well as they had in the laboratory and, secondly, there is a question of economics.

Q. To what extent did you pursue the chemical method?

A. We briefly tested it out in the laboratory and prepared economic reports.

Q. And, your eventual conclusion was to drop that par-

ticular method of producing sodium chlorate, is that correct?

A. That is correct.

Q. It is not, in your view, a commercially feasible method of producing sodium chlorate, is that correct?

A. That is correct.

* * * * * * *

[fol. 2058] By Mr. Freed:

Q. Dr. Wojcik, are you familiar with Electrochemical Survey Report H-35.506 entitled, "Production of Sodium Chlorate from Soda Ash at Saltville, Virginia" dated March 6, 1957?

A. I am.

Q. Directing your attention first to the cover of that report, I notice that on many of these reports in the list of names in the left-hand column, the names towards the bottom of the list have a capital "S" in front of them. Could you explain to us what that designation signifies?

A. I sure can and it means that these people have received the summary page or received an abstract of the report, usually the summary page.

[fol. 2059] Q. So that if a person's name appears twice on the name list, it means they have received both the full report and the summary but if their name only appears with an "S" next to it, that person only received the summary?

A. That is correct. I should like to add, he does have the privilege to see the whole report if he desires to so do.

Q. Also a general question in respect to these reports, what is the significance of the serial numbers, in this case H-35.506? We notice that there are other reports with different designation. In what category or class do reports with this kind of number fall?

A. Principally in the category of engineering-development reports. There would be others from research, for example, with a different series number.

Q. But a report with an H-35.500 number would refer to engineering and——

A. Development.

Q. —development reports. Now, directing your atten-

tion to Page 2 of Report No. 506, you will note that part of the summary states that it is concluded that the proposed [fol. 2060] process presents a method for the corporation's rapid entry into sodium chlorate production and on Page 4 of the same report, the conclusion spells out and I quote:

"The return on the investment has been calculated as 35 percent and the pay-out time as 2.4 years."

Can you enlighten us as to what happened to this report? Were its conclusions accepted or were they found deficient in some respect?

A. They were found deficient principally in the respect that we were not sure completely of our technology.

. . . . . .

[fol. 2061] Q. At the time of this report, which is March [fol. 2062] 1957, was the need for proceeding pretty fast that you have already referred to a need that was recognized on a divisional level in the company?

A. I don't feel qualified to answer that question. I had not discussed the subject matter with other people as, for example, the sales and management. I was cognizant of the fact that we had to proceed rather rapidly on chlorate production if we were going to go into it on our own.

Q. But was your cognizance of that fact based on instructions from or conversations with other members of management?

A. No, it was not.

Q. It was then a recognition on your own part of the realities of the sodium chlorate business?

A. I think this is correct.

Q. At the time in March 1957, were you the Director of the Research and Development Department?

A. For Industrial Chemicals, yes.

Q. And can you tell us the——

A. Excuse me, correction. I was Manager then of Research and Development.

[fol. 2063] Q. Can you tell us the other posts and the dates of those posts that you held in the Research and Development Department?

A. About '54 to '59, I was Manager of Research and Development. From about 1959 to 1960, I was Director

of Research and Development, Industrial Chemicals, and then from 1960 for a while, I was Director of Inorganic Research and had administrative duties over Quality Control and more recently, as I stated before, I became Scientific Adviser.

Q. Dr. Wojcik, during the balance of 1957, following the March report on the soda ash process, were you and your department continually engaged in a sodium chlorate research and development in an effort to achieve a commercially feasible process?

A. I believe this is correct.

Q. Do you recall, Dr. Wojcik, being present at Division Management meetings of the Chemicals Division in the period 1955 to 1960?

A. From about 1956 to perhaps '58, '59, yes, I would have been present.

Q. And was your presence at that, at those meetings [fol. 2064] part of your responsibility as head of the Research and Development Department?

A. Yes, I was invited to those meetings to participate.

. . . . . .

[fol. 2065] Q. Do you recall anything being said or hearing anything in this general period, the end of '57, the beginning of '58, about the reasons why Olin and Pennsalt were entering into the sales arrangement?

A. Yes, I vaguely recall some statement to the effect that if we are going to give serious consideration to the production of sodium chlorate, we ought to do something about firming up some customers which we could later supply with our own production.

Q. Do you recall when you became aware of that philosophy or reason behind the arrangement?

A. Not for certain but I would guess it would be '57 or '58 somewhere.

[fol. 2066] Q. Do you recall who told you that?

A. No, sir, I do not. This could have been mentioned by somebody at a meeting and I just don't recall whom it might be.

Q. It nevertheless represents your understanding based on your involvement with the management of the Chemicals Division? This was the understanding that you had of

the philosophy and the background of the sales arrangement with Pennsalt, is that correct?

A. Well, you injected something there that I am not too certain of. The sales arrangement with Pennsalt, I had no knowledge at the time but I do know that we had a feeling then that if we were going to seriously consider production of sodium chlorate, we might as well try to arrange for some sales so that when we got into the production, it would be an easy matter for us to supply customers with the desired product.

Q. Do you recall any discussion in this period about the possibility of Pennsalt and Olin jointly entering into the production of sodium chlorate?

A. This was back in 1957?

Q. In the end of '57, the beginning of '58.

[fol. 2067] A. I am not sure that I do know.

Q. Can you, on the basis of your review of the materials in your file, recall approximately when you first heard that Olin and Pennsalt were considering a joint production effort in sodium chlorate?

A. I don't recall I ever heard that there was serious consideration being given to that until Mr. Block told me, as I had stated, sometime late in '59 that a decision had been made to form Penn-Olin.

Q. Is it correct then that until the latter part of '59, when you had your conversation with Mr. Block, you were proceeding in your sodium chlorate exploration effort on the assumption that Olin would enter into the production of sodium chlorate on its own?

A. Oh, that I believe is so, yes.

Mr. Barnum: If at all. Is that the way that question should be interpreted? Certainly not on the assumption that Olin would enter into the production of sodium chlorate?

The Witness: A good point but I was always of the opinion if we could prove our case to management that this [fol. 2068] was a profitable thing for us to do, we would go ahead on our own.

By Mr. Freed:

Q. Do you recall, Dr. Wojcik, early in February of 1958 having a conversation with Mr. Logan with regard to assembling information on the economics of producing both chlorate and perchlorate?

A. I don't recall the conversation. I recall having received a memorandum from him asking me to give some consideration to the matter.

Q. And are you referring, sir, to the memorandum dated February 19, 1958, from Mr. Logan to yourself?

A. That is correct.

Q. Can you, based on your examination of this document from your own files, recall anything about either the conversation or the reasons given by Mr. Logan for the particular instruction at this time to assemble information?

A. Yes. I am not referring to any discussions with Mr. Logan but as I mentioned before, I was familiar with the possibility of a huge demand for perchlorate to be used in guided missiles and so on and couldn't help but feel that [fol. 2069] more than ever, we should get into the sodium chlorate production on our own. As a matter of fact, we had done a little bit of work at one time at the Government's expense for the production of ammonium perchlorate by means other than the use of an electrochemical reaction.

Q. When was that, sir, that you undertook that for the Government?

A. On, that—I am not sure but I am guessing now—'53, '54.

Q. That was pursuant to the research and development contract between Olin and the Government?

A. That is correct.

Q. Did the work which you did at that time in 1953 or '54 involve the production of ammonium perchlorate from sodium chlorate or was there another chemical that was used as the ingredient?

A. It was sodium chlorate that was going to be used as the raw material and we were then asked by the Government to investigate processes other than electrochemicals that would use platinum for the conversion of sodium chlorate to perchlorate.

[fol. 2070] Q. And what was the result of your study?

A. The result of our study was that this could be done

but we would not do it unless there was an emergency in the country. In other words, it was more costly to make perchlorate by chemical means than by electrochemical. This was the specific project assigned to us to be prepared if an emergency arose.

Q. So that the only tangible result of your study or a tangible result of your study was that Olin developed a means of producing ammonium perchlorate by electrochemical means in an emergency, is that correct?

A. Not by electrochemical means. We would start with sodium chlorate and by chemical means convert it. Again I qualify that by saying this. In some phase of this process, electrochemical means were used for the production of sodium chlorate.

Q. To your knowledge, has Olin, subsequent to the completion of its work on the Government contract, done any further work in the field of ammonium perchlorate production or research?

A. To my knowledge, no.

Q. This memorandum refers to a discussion between [fol. 2071] Mr. Logan and Dr. Hanford, who I gather had responsibility in the field of perchlorate. To your knowledge, has Dr. Hanford or the Solid Fuels Group within Olin maintained any interest or maintained any work in the perchlorate field?

A. I would say that Olin as a whole would always be interested in what is going on in the perchlorate because it indirectly affects our chlorine cost of production, plus our desire to go into the chlorate production but as a matter of fact, I would not know what some of the other divisions are doing, especially if it were a Government project that they were working on and it was of a confidential nature.

Q. But to your knowledge, as of today, Olin has no activity in the perchlorate field?

A. That, I believe, is correct.

Q. Dr. Wojcik, can you tell us who Mr. Schiessl and Mr. K. Lewis were in terms of their positions in the Company in February of 1958?

A. Mr. Schiessl was my assistant and Mr. Kennett Lewis was, I believe, the Chief Engineer for the Division at that time.

Q. Are you familiar with the memorandum which Mr.

[fol. 2072] Schiessl directed to Mr. Lewis on February 27, 1958, with a copy to you?

A. I am.

Q. That document has been previously marked Olin D246. In the third paragraph, Mr. Schiessl makes the statement, "It is felt that the cost estimates for electrolytic sodium chlorate are fairly accurate. Further, we feel there is sufficient know-how within the division to proceed directly with commercial production of sodium chlorate. Perhaps this point should be corroborated by Joe Wood and W. C. Gardiner."

Did these views as expressed by Mr. Schiessl represent your own feeling as of the time of this memorandum?

A. Well, let's take this apart. The first sentence refers to cost estimates and I know precisely what I asked Mr. Schiessl to do there and that was to check the arithmetic and make sure he didn't find any glaring errors.

Q. The arithmetic that had been set forth on Electrochemical Survey Report H-35.504?

A. That is correct. Now, when it comes to the question of sufficient know-how, I don't hardly subscribe to what is being said here. It was always my feeling, sure, if life [fol. 2073] depended upon it, we could make it but the economics bothered me and the unknown factors that I had mentioned previously, which tie in with the economics.

The fact that Schiessl goes on and says this point should be corroborated by Joe Wood and Gardiner indicates that even in his own mind, he was not certain of the statement made, of the second sentence.

Q. Do you recall discussing this particular point with Mr. Schiessl after receiving the memorandum?

A. I do.

Q. Do you know whether his statement about sufficient know-how was accurate in so far as ability to produce sodium chlorate without regard to the economics is concerned? In other words, if you would separate technological ability from commercial feasibility or profitability, was it your feeling at this time that Mr. Schiessl's statemment was correct?

A. No, it was not.

Q. And what were the problems—strike that.

Do you know what led Mr. Schiessl to write this particular sentence?

A. I think I do.

[fol. 2074] Q. Would you tell us?

A. He had made a review of the literature and compared what we knew about the process at that time with what was in the literature and it was his personal feeling that we did have enough know-how. I questioned him about certain phases and there is no question in my mind that his replies were a bit fuzzy.

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Q. On March 27, 1958, Mr. Schiessl wrote a memorandum to Mr. Logan on the subject of sodium chlorate and ammonium perchlorate. The document is Olin D247. Are you familiar with that particular report, sir?

A. I am.

Q. The next to the last paragraph on the first page refers to some development work at Niagara Falls. Is that in reference to all of the work which we have been discussing in your deposition today or does this refer to some specific project that we have not previously touched upon?

A. I believe that in this case, Mr. Schiessl is referring to the work that we had done for the Government on the [fol. 2075] production of ammonium perchlorate.

Q. The statement is contained on page 1 under the heading, "Sodium chlorate chemical process" and on page 2 of the document there is a new section entitled, "Ammonium perchlorate." I wonder whether——

A. Correction. If I may correct what I said before. You are correct, Mr. Freed, that Mr. Schiessl is referring to chlorate by the chlorination of caustic when he says some development work on this process has already been done at Niagara and further study is needed before commercialization.

Q. Do you recall, sir, whether this particular report by Mr. Schiessl stated views and conclusions which were endorsed by you in the memorandum which we discussed previously?

A. In principle, yes. In detail, not necessarily so.

Q. Are there any glaring or important errors in this report that you could point out to us?

A. I couldn't answer that question without studying this

in detail. Offhand, I have reviewed it once. I didn't see anything glaring or else I would have taken it up with Mr. Schiessl before it was released.

[fol. 2076] Q. But your recollection is that this memorandum was sent as is to Mr. Logan for action by him?

A. I have had a chance to look at it before it was released and I asked Mr. Schiessl to summarize our views on this for Mr. Logan's benefit.

Q. Dr. Wojcik, are you familiar with the memorandum dated April 7, 1958, from Dr. Gardiner to Mr. Wood, copy of which was sent to you, entitled, "Chlorates"?

A. I am.

Q. In the second sentence of the second paragraph, Dr. Gardiner states, "If we get into electrochemical chlorate again, we should investigate it." The "it" is referring to the use of vanadate. Can you tell us on the basis of the statement I have quoted whether Dr. Gardiner meant to imply that at this time in April, 1958, Olin's interest in electrochemical chlorate had subsided or was he simply referring to the particular process which had been frowned on?

A. He was referring to a particular process, in this case being the usual method of producing chlorate. We were still at the same time working on trying to develop the platinized titanium anodes for use in chlorate production.

[fol. 2077] Q. Then Dr. Gardiner's idea—correct me if the statement is wrong—was that if Olin were to return to exploring conventional means of producing sodium chlorate, the use of vanadate would become significant to the movement; however, Olin was engaged in trying to discover a lower cost method of producing sodium chlorate?

A. That is correct.

Mr. Freed: Off the record a minute.

(Discussion off the record.)

Mr. Freed: Back on the record.

By Mr. Freed:

Q. Dr. Wojcik, to clarify the record, could you explain to us briefly what vanadate is and what the significance of Dr. Gardiner's remarks to Mr. Wood about its use in electrochemical chlorate production signifies?

A. Vanadate is a salt of vanadium. In this case, it was

the sodium salt and its use in conjunction with chromium would be to minimize corrosion during the production of chlorate.

Q. At any time subsequent to this memorandum, did you or your department in fact explore the use of vanadate [fol. 2078] further as an anti-corrosive or with reference to the corrosion part?

A. I do not think so. I don't recall hearing about it.

Q. Sir, I would next like to direct your attention to the very voluminous report which is numbered H-35.701 and entitled, "Engineering Survey Report" on the subject of manufacture of sodium chlorate. The date of the report is April 29, 1958 and it was typed on May, 1958.

Mr. Barnum: What is the number in the book?

Mr. Freed: There is a pencil notation D250. This is Engineering Survey Report H-35.701.

Mr. Barnum: Would you repeat the question?

(Question read.)

By Mr. Freed:

Q. Are you familiar with that report, sir?

A. I am.

Q. Turning first to the designation of this document as an Engineering Survey Report, I would like to observe for the record that all of the reports discussed up to this point are Electrochemical Survey Reports.

I wonder if you could enlighten us to the significance [fol. 2079] of this as an engineering report?

A. In general, we have always considered the group that worked on electrochemistry as a part of the development segment, which was principally headed up by engineers, and it is quite possible at one time it was called an Engineering Survey Report and at some other time a Survey Report released by the Electrochemical group.

Q. Is the fact that this is an Engineering Survey Report indicative of any greater interest or more widespread interest within the Chemical Division on the subject matter of the report?

A. Essentially, that is correct.

Q. Do you recall, sir, the circumstances under which this particular report was prepared? Do you recall who in-

structed, gave the instructions for its preparation and what the circumstances surrounding it were?

A. I sure do.

Q. Would you tell us?

"Mr. Block asked for a report which would bring together Research and Development's latest thoughts on processes for the production of sodium chlorate. Dr. R. C. Harshman was given the assignment to prepare the report."

[fol. 2080] Q. And when did that meeting take place, do you recall?

A. Offhand not, but I would guess a few months before the report was written.

Q. What was Mr. Harshman's position at the time?

A. He was a Supervisor of the Engineering Group in development.

Q. Was Mr. Harshman one of your subordinates at the time?

A. Indirectly, yes.

Q. What was the name of the committee or group at the meeting at which Mr. Block gave these instructions?

A. There was no name. There was no committee but periodically—at this particular time, it was about once each month—Mr. Block would come to Niagara Falls and sit down with Research and Development and review all of the projects that were going on at that time.

Q. Do you recall Mr. Block's reasons for requesting this particular report at the meeting at the early part of 1958?

A. I sure do.

[fol. 2081] Q. Would you tell us what they were, sir?

A. He had been told about some of our previous evaluations and survey reports on sodium chlorate and especially statements made about the profits and he was not satisfied we had enough information on which to draw even the conclusion that we did at that time. Our thoughts expressed to him then were that we needed to do a great deal more of work in order to be sure and even if the limited profit we were showing then was real, so he wanted to have somebody make an independent study. He asked Dr. Harshman to do that. Normally, I would have asked Dr. Gardiner and review to present another report but Mr. Block specifically requested Dr. Harshman to do it.

Q. Did this request and the interest which it reflected on Mr. Block's part represent the first considerable expression of interest by him in the sodium chlorate project? Was this the first time that he had indicated such a detailed interest in the work which you had been doing?

A. No, this was not the first time but as I recall the circumstances under which this was—this report was requested of Dr. Harshman, he felt that we weren't moving [fol. 2082] fast enough, number 1, and number 2, we weren't sure of our information sufficiently on which he could evaluate whether we should continue or try something else.

Q. Did Mr. Block at this meeting make any reference to the target date by which he wished to have a decision by Olin concerning entry into the chlorate business?

A. Mr. Freed, I don't recall of any target date set by Mr. Block. It was his nature to try to get things done as fast as possible.

Q. Did Mr. Block say anything which would have indicated at that time Olin's interest in entering sodium chlorate production with anyone else?

A. No, sir. I do not recall his ever bringing that up.

Q. This particular study then was undertaken for the purpose of summarizing Olin's own studies and capabilities to enter into sodium chlorate production by itself, is that correct, sir?

A. Yes. Off the record a minute.

(Discussion off the record.)

By Mr. Freed:

[fol. 2083] Q. Directing your attention, sir, to the conclusions and recommendations stated at page 13 of report No. 701, can you tell us the extent to which those conclusions and recommendations were accepted and acted upon by Mr. Block?

A. Yes, I believe I can. He felt that for the first time, we had presented a picture which warranted a real drive on Mathieson's part to go ahead with the chlorate production on its own.

Q. Was Mr. Block's conclusion in this respect communicated to you in person, at a meeting, or by correspondence or under what circumstances?

A. I remember his making the statement that chlorate

production based on what we have here now looks better than it ever did before as far as profits are concerned.

. . . . . .

[fol. 2084] Q. Dr. Wojcik, can you tell us what instructions, if any, Mr. Block issued after receiving the report with respect to further activity on the part of your division in the chlorate manufacture area?

A. Mr. Block was a great one for trying to firm up any and all outside knowledge that we could get without making commitments to anyone and to that extent, he had asked [fol. 2085] me, as I recall, to try to find out what was available in other areas and I, of course, tried to get the information through our International Division. I believe this is correct.

Q. In other words, it would have been at this time after receiving this report that Mr. Block asked you to investigate the availability of foreign technology or construction or production know-how assistance, is that correct?

A. You stated foreign. I don't recall that he ever limited me to foreign information. It was just general information, whatever was available, wherever it came from.

. . . . . .

[fol. 2086] By Mr. Freed:

Q. Dr. Wojcik, do you have in your file the memorandum to you from Mr. R. C Harshman dated August 19, 1958, marked Olin D256? The document is five pages long and it is entitled, "Cost Estimates on Electrochemical Production of Sodium Chlorate"?

A. I do have and I do recall seeing this document.

Q. Do you recall, sir, the circumstances under which this particular memorandum was written to you?

A. Yes. This ties in with the engineering survey report, as I recall, that Block wanted firmed up to something that he could use for discussion purposes as quickly as possible.

Q. At the bottom of page 2 of the memorandum, Mr. Harshman states that sodium chlorate represents a logical expansion of the product line of the Industrial Chemicals Division if the production of sodium chlorate could be carried out at a location where cheap power was avail-

able, where shipping charges on the product to the major consumers would be small and where other Olin Mathie-
[fol. 2087] son operations existed or could be set up, it should represent an attractive venture.

These conclusions of Mr. Harshman tend to parallel those in report 701, which we have previously mentioned. Do you recall whether any particular action was taken as a result of this memorandum by Mr. Harshman?

A. I don't recall any particular action taken because of this report. I have the feeling that it helped strengthen Block's thoughts about our going ahead.

Q. Strengthen, did you say?

A. Yes, Block's thoughts of our going ahead with the production of sodium chlorate.

Q. In the fall of 1958, sir, negotiations with Vickers-Krebs commenced and there is a memorandum from Dr. Fodor to Dr. Gardiner, copy of which was sent to you, dated October 3, 1958. Do you recall, sir, the reason why —well, can you explain to us first what the Turnkey proposal was which Vickers made?

A. No, sir. I don't recall what the Turnkey proposal was.

Q. Do you recall at this time, did you have primary [fol. 2088] responsibility for the negotiations with Vickers-or was that delegated elsewhere?

A. I did not at this time have primary responsibility for negotiating with Vickers-Krebs.

[fol. 2089] Q. Dr. Wojcik, on November 11, 1958 a meeting was held with representatives of Vickers-Krebs to discuss the plant which they were proposing to build for Olin. A summary of that meeting is contained in a memorandum from Mr. Holmes to Dr. Gardiner dated November 24, 1958, marked Olin C 431 and which indicates that it was received by you on November 26, 1958. The memorandum summarizes the case of proposal which Vickers-Krebs was in the process of making.

Can you tell us what the reaction of your department and of the Chemical Division management was at this time toward the negotiations with Vickers-Krebs?

A. I can speak for the department but not for management. We, as you know, were asked to get outside information and this is indicative of what we did, talked to

whomever we thought could help us in firming up our thoughts on best ways to make sodium chlorate, costs, plant investments, and so forth.

Q. Your negotiations with Vickers-Krebs were being conducted as part of the program for assemblying information that Mr. Block had laid down earlier in '58, is that correct, sir?

[fol. 2090] A. That's correct.

Q. What was Olin's objective insofar as Vickers was concerned? What was the target?

. . . . . .

[fol. 2091] A. Olin's objective there was to determine how sure Vickers-Krebs was of its knowledge and—in constructing sodium chlorate plants and to help firm up our evaluation studies and also to give serious consideration to engaging a firm which would construct a sodium chlorate facility for us. We had no target date at the time on discussions when they were carried out with Vickers-Krebs.

[fol. 2092] By Mr. Freed:

Q. Did there come a time after the period we have now been addressing ourselves to, namely, late 1958, when a target date was established?

A. I don't recall ever being told that there was a target date. I do know that we were being pressed for information on our ability to make sodium chlorate, know-how, things we were doing in the laboratory on the development of the platinized titanium anode.

Q. Dr. Wojcik, on December 11, 1958 Dr. Gardiner wrote a memorandum to you entitled sodium chlorate plant location. This document is designated Olin D 262. It contains freight equalization information with regard to various plant locations of Olin Mathieson Chemical Corporation. Under whose instructions, sir, was this freight equalization and plant location study undertaken?

A. I don't recall for sure but I assume it was Mr. Block that asked for this information.

Q. In the top center of this document appears a handwritten notation which I believe states. "To discuss with E. Block." If my reading of that notation is correct, sir,

[fol. 2093] can you tell us whether in fact you discussed this information with Mr. Block and what the results of that discussion were?

A. I did discuss this document with Mr. Block. He had instructed me to write to our Mr. Collison for power rates at Burnside and he had talked to me about barge or bulk shipment of sodium chlorate. I had told him at the time that there was no clearance for the bulk shipment of sodium chlorate in barges.

Q. That there was no clearance?

A. Yes.

Q. Can you explain what that term means here?

A. In order to ship chemicals from one state to another state and other places you need clearance from proper authorities who would be satisfied that it is safe to so do and we did not at that time have the clearance.

Q. Dr. Wojcik, I direct your attention now to "Electrochemical Survey Report H-35.507," entitled comparison of Vickers-Krebs and Pechiney sodium chlorate plants. The report is dated December 11, 1958 and was typed on January 8, 1959.

A. Did you say nine or one?

[fol. 2094] Q. I said January 8, 1959.

A. I just wanted to make sure.

Q. At the time this comparision was made of the proposal submitted to Olin by these foreign countries, was Olin actively engaged in negotiation with Pechiney?

A. We never were actively engaged in negotiating with either Pechiney or Vickers-Krebs. We were feeling our way to that point.

Q. The term actively negotiating, sir, is based on the fact that there have already been delivered to the plaintiff a number of items of correspondence and memoranda dealing with the Vickers-Krebs case but Pechiney appears only in references from time to time and there is no direct correspondence. My question to you is designed to determine the nature of the discussions which you were having with Pechiney as contrasted with the nature of the discussions then going on with Vickers-Krebs.

A. I, personally, wasn't involved in any discussion with Pechiney personnel on sodium chlorate production, then again I repeat all that we were after there is information of

a general nature which anyone interested in the subject [fol. 2095] matter could get for further study and evaluation by research and development.

To the best of my knowledge we were also trying to do the same thing with Vickers-Krebs, trying to get general information. Quite often a company like Pechiney or a company like Vivkers-Krebs will publish bulletins that spell out in some detail the process, itself, power, salt, capital investment, so that with that type of information you can quite readily get some idea as to whether you are in the same ball park on your own estimates or not.

Q. The Vickers-Krebs material which was furnished to the plaintiff from your own file indicates that Vickers was interested in furnishing and making proposals to Olin for furnishing services of various types in connection with your sodium chlorate effort. Was Pechiney also active in soliciting or taking affirmative steps to enter into an arrangement with Olin in the same manner as Vickers?

A. Not to my knowledge.

Q. Then would you say, sir, that the investigations with Vickers were the most advanced and the most mature of all the efforts which had been undertaken by your company in [fol. 2096] the area of securing foreign technology and know-how?

A. It would appear so. However, I was never present at Vickers-Krebs when any serious consideration was given to the sodium chlorate plant per se. Is that clear?

Q. When you refer to sodium chlorate plant per se what are you contrasting that with? Are you contrasting that with discussions dealing solely with development of a particular chlorate cell?

A. That's correct. I was present at meetings when we discussed the developments of a particular sodium chlorate cell.

Q. Dr. Wojcik, I would like to turn now to Electrochemical Survey Report H-35.508 entitled Econmic Location of Sodium Chlorate Plant, dated January 9, 1959, typed January 20, 1959, and designated Olin D 234. Are you familar, sir, with the contents of this report?

A. Yes, I am.

Q. The summary of this report on Page 2 indicates that when freight rates and production costs have been calculated

at various Olin locations, Saltville, Virginia, "seems to be the best location should the plant be built at an existing [fol. 2097] QMCC Chemical Division Plant." The conclusions and recommendations, however, indicate that the economics of a grass roots plant should be reviewed. Can you tell us whether this report resulted in a grass roots study by Olin?

A. Offhand, I don't recall but certainly in the gathering of our information from outside sources it would be only natural for us to ask about the costs of putting up a grass roots plant.

. . . . . .

Q. Returning to the recommendations that I referred to before in Report No. 508, Dr. Wojcik, the recommendation dealing with a grass roots plant concern a grass roots plant in the TVA area, where lower freight equalization and lower [fol. 2098] power costs might be available, and I ask you whether in your recollection the Chemicals Division at any time undertook a survey of grass roots locations for a sodium chlorate plant?

A. We certainly did look for cheap power in the TVA area and to this end it is only logical to conclude that we had considered a grass roots plant somewhere.

Q. Do you recall any of the grass roots locations that were seriously investigated by Olin?

A. Not offhand.

Q. Surely after the issuance of Report No. 508 a conference was held in the office of Canadian Vickers Limited in Montreal on February 10.

Mr. Barnum: Are you stating that as a fact of your own knowledge, Mr. Freed?

Mr. Freed: I haven't finished the question.

By Mr. Freed:

Q. On February 10, 1959, which conferences reflected any memorandum by Dr. Gardiner dated February 11, 1959, copies of which were furnished to Dr. Wojcik and others. This document is designated Olin C422, and are you familiar with the memorandum of that conference, sir?

[fol. 2099] A. Yes, I am.

Q. The last paragraph on the first page states, "Our management is anxious to get into the chlorate business and are interested in the Vickers-Krebs proposal for a chlorate plant but feel that they cannot afford to overlook the possibility indicated for operation with platinized titanium anodes.

"We told them that Mr. Block had instructed us to find out if they were willing to give us their know-how in constructing and developing a chlorate cell in exchange for rights to exploit the cell which might be developed."

I would like to ask first whether that paragraph accurately reflects the position of Olin management, if you would recall it at the time, and if it was known to you?

A. I might say for the record that Dr. Gardiner could have considered me as part of management and if I asked him to do something if would be very easy to say our management, or management asked me to do this. It does not necessarily reflect all the people that might be considered as a part of the management group.

Q. At least insofar as management included Mr. Block [fol. 2100] to your knowledge would this statement inaccurately reflect the attitude and position of Mr. Block as you then understood it?

A. As I understood it did not inaccurately reflect his thoughts.

Q. To state it affirmatively then, this paragraph would represent what you thought Mr. Block's feelings about this sodium chlorate project were?

A. Essentially, yes.

. . . . . .

[fol. 2101] By Mr. Freed:

Q. Dr. Wojcik, February 16, 1959 the minutes of the Division Management meeting reflect that you were among those present. I would like this document to be marked Plaintiff's Wojcik Exhibit 4.

(Plaintiff's Wojcik Exhibit No. 4 was marked for identification.)

By Mr. Freed:

Q. I would like you to examine the minutes of the February 16 meeting and ask you, sir, if you can recall any of the details of the Pennsalt proposal referred to or the Pennsalt interest referred to in the minutes referred to on the joint venture on chlorate.

A. No, sir, I do not recall any of the details.

Q. Do you recall the subject matter of a possible joint venture with Pennsalt being discussed on that date at that meeting?

A. I don't know whether it was on this date at this meeting but I recall having heard a joint venture with Pennsalt mentioned at division or management meetings about this [fol. 2102] time of the year, '59 that is.

Q. Can you recall any of the details that were then being discussed of the nature of a possible joint venture with Pennsalt?

A. No. As a rule details were not discussed at management meetings. The subject matter was mentioned or if there was a specific item that needed special attention it was called to some individual's attention for action.

Q. In the discussions which you did hear or the information which did come to your attention in or out of division management meetings around February 19, 1959 do you recall any of the details or any of the facts related to you concerning the Pennsalt joint venture possibility?

A. I don't recall any details of facts.

Q. Can you recall any mention being made of the proposed location or a joint facility in February 1959?

A. No, I do not.

Q. Do you recall any discussion about the effect or the possible effect of a joint venture with Pennsalt on the research and development activities which you were then conducting in the sodium chlorate field?

[fol. 2103] A. No, I do not recall any statements made about the effect of the joint venture with Pennsalt on their research and development work.

Q. Can you recall being concerned at all at this time about the possible effect of a joint venture with Pennsalt on the activities which you were then conducting in the sodium chlorate area?

A. I wouldn't say that I was concerned. I was anxious and hopeful that research would be instrumental in convincing management that we had sufficient information to proceed on our own.

Q. Do you recall making your views in this respect known in relation to what you had heard about the Pennsalt negotiations?

A. No, I do not recall with possible exceptions to associates that were on this project like Nicolaisen or Gardiner.

Q. Confining my question to possible discussions which you may have had with Nicolaisen and Gardiner who were your associates at the time, do you recall expressing any concern to them or engaging in any discussions with them [fol. 2104] about the effect or possible effect of these Pennsalt negotiations on your own activities?

A. No, I don't recall having discussed anything in particular with them but I do feel it would be obvious to them as well as to myself if we were going to be instrumental in going on and on, it was necessary to produce as much concrete evidence based on our latitude of work as quickly as possible.

Q. Did you take any affirmative steps that you can recall in conversation or instructions to subordinates following the first information you received about the Pennsalt negotiations with respect to voicing objections or pushing ahead harder on your own research and development work?

A. Except for putting a little more pressure on the fellows to get the answers out more quickly, if nothing else.

Q. But at least to that extent you did try to speed up your own research and development work and studies?

A. Yes.

Q. Do you recall when and to whom you indicated desirability of a speed up?

A. I thought I indicated that in the answer to the pre- [fol. 2105] vious question when I mentioned Nicolaisen's name and Gardiner's name.

Q. Can you tell us during this period we have been discussing, beginning with the first Electrochemical Survey Report in 1955 and coming up to February 1959 approximately what portion of the time, of the time of your department and your department's resources was being devoted to the sodium chlorate project?

A. Not offhand but I would say it was a fair amount and by that I mean perhaps 25 percent.

Q. Would that be 25 percent of the people in your division or 25 percent of the total resources in people and money and everything else that goes into making up your department?

A. Principally people.

Q. Then 25 percent of the people may have been spending full time on this. The others would be engaged in other chemicals division projects?

A. That's correct. I should like to state that this 25 percent was essentially the engineering and the electrochemical groups and need not necessarily encompass the entire research and development staff that were under my super-
[fol. 2106] vision at the time.

Q. Approximately how many people were represented by the group that was devoting its efforts in large measure to sodium chlorate in the period from 1955 to 1956?

A. I can't be sure because we would be switching those people around and have to go back to the records and you may find there were as many as, oh, perhaps a dozen people involved from time to time, not necessarily steady.

Q. Turning your attention now, sir, to Electrochemical Survey Report H-35.509 and entitled Geographic Survey of Electricity Cost for Sodium Chlorate Plant. This report is dated February 25, 1959. It was typed on April 14, 1959 and it is designated Olin D 233. Are you familiar, Dr. Wojcik, with the contents of that report?

A. I am.

Q. Do you recall the circumstances which led to the preparation of this report following your report No. 508 which had also dealt with economic location but which also had dealt with the location of a sodium chlorate plant?

A. Well, if you will look at the titles of the two reports you will see that in one case we are talking about an eco-
[fol. 2107] nomic location of sodium chlorite plant and on the other——

Q. Chlorate, ate?

A. Sodium chlorate, I am sorry, and the other case a geographical survey of electricity cost for sodium chlorate plant. We realized that at that time, that the cost of electricity was going to be a significant factor in the production

costs of sodium chlorate. We wanted to make certain that we were going to locate this plant in the best area as far as costs of production or current, taking all phases of production into account.

Q. And so far as the choice of location that you would survey I believe you will find that a comparison of reports 508 and 509 shows that Chattanooga is recommended on Page 5 of Report No. 509 as a location at which freight rates should be computed and compared with those of other locations but that Chattanooga had not previously appeared in the electrochemical survey reports. Do you know whether this report 509 is in fact the first which you undertook any careful study or consideration of Chattanooga?

A. Offhand I don't recall.

[fol. 2108] Q. Can you recall under what circumstances or by whom Chattanooga was first suggested as a possible location for a sodium chlorate plant?

A. I believe I can. I am not certain. It seems to me that one of our market development people had gone out into that area to test out the wire drawing compound.

Q. To test out what, sir?

A. A wire drawing compound, and he had talked to some people in that location about the desirability of locating chemical plants there and made it known to us that this may not be a bad place for the location of a sodium chlorate plant.

Q. Do you recall who that representative of Olin was?

A. Offhand I don't recall his name.

Q. He was a member of which branch or division or group?

A. Market development.

Q. Was it Mr. Northgraves?

A. No, it was not.

Q. As a result of the recommendation, recommendation No. 2, in Report No. 509, did you undertake a study of [fol. 2109] freight rates at Chattanooga?

A. I am not certain but I believe this was done.

Q. Was Chattanooga at that time a grass roots location?

A. No.

Q. What facilities of Olin were located at Chattanooga at this time?

A. We had a wire drawing operation going on there which was a part of Olin before they merged with Mathieson.

Q. I would like now to turn to Electro-Chemical Survey Report H-35.510 which is blessedly the last one of that particular series of electrochemical survey reports. It is dated April 17, 1959. It was typed on May 7, 1959. It is designated Olin D 232 and it is entitled, "Economic Location of Sodium Chlorate Plant Using Platinized Titanium Electrode Cells.

Are you familiar with this report, Dr. Wojcik?

A I am.

Q This report shows on Page 3 that Chattanooga, Tennessee, is a better location for a chlorate plant than Saltville, Virginia or McIntosh, Alabama. Our production costs at Chattanooga are 10 to 15 percent lower. Return on in-
[fol. 2110] vestment is 11 to 19 percent higher at Chattanooga.

And on Page 6 among the conclusions to this report is the statement that a 40-ton-per-day sodium chlorate plant using plantinized titanium electrodes reduces the investment $375,000 or 11.7 percent, and on Page 7 it is recommended that Chattanooga be given more detailed consideration as a location for a sodium chlorate plant, and it is also recommended that the platinized titanium electrode be tested in a prototype cell in order to better evaluate the method of operation outlined in this report.

On the basis of the conclusion and recommendations of this report and also the material in the report which has not been read, can you tell us what response this report met with in your department and thereafter from management?

A. I don't recall of any specific response from management. Our department, of course, felt optimistic about this Chattanooga location. You will also note that in this particular instance we were thinking of the platinized type titanium anode about which we didn't know too much as far as the utility of such anodes in a protoype cell and we were asking for permission here to explore it further.

[fol. 2111] Q. And was that permission granted?

A. Yes.

Q. By whom and when?

A. Mr. Block, and as to the time I don't recall the exact date.

Q. Was it likely to be around the date of the report around the early part of May '59 as far as you can recall?

A. It's possible.

Q. Was any action taken on the recommendation that Chattanooga be given more detailed consideration?

A. I don't recall any specific action taken on that location. I would, however, like to add that we were encouraged to give consideration to the construction of the prototype chlorate cell which would use platinized anodes.

Q. And did you in fact build such a prototype?

A. No, sir.

Q. What happened between the time Mr. Block authorized you to proceed and thereafter with respect to this matter?

A. I think you will find in the records our approaching [fol. 2112] Vickers-Krebs for help in design of a prototype cell and negotiations toward trying to develop an agreement that would permit us to work with Vickers-Krebs.

Q. Was Mr. Block's authorization for you to proceed with the platinum anode confined to proceeding by way of agreement, with possible agreement with Vickers-Krebs or were his orders more general than that in simply instructing you to proceed with the development of a prototype or platinized titanium anode by any means available?

A. You are speaking now of the prototype cell?

Q. Yes, sir, if you believe——

A. Because prior to that we were doing something in the laboratory all along on platinized titanium anodes.

Q. Is there a difference between the anode and a cell?

A. The anode is an integral part of the cell.

Q. Is it the critical part insofar as the use of platinized titanium is concerned or are there additional technological problems over and above the development of the anode?

A. The construction of a cell in itself, large commercial [fol. 2113] cell I am speaking of, is a problem.

Q. But the technological problems with which Olin was grappling at this time, did it center on the anode, whether the anode would be of carbon or of platinized titanium,

or were there a number of problems which perplexed you, of which the anode was only one?

A. Specifically we were anxious to test out the usefulness of a platinized anode. Our report shows that we thought we could make chlorate cheaper if our laboratory studies were real and could be confirmed on a larger unit. Therefore a quest for knowledge on a prototype cell was tied in with the use of a platinized anode.

Q. The affirmative steps we were taking as a result of this second recommendation in Report No. 510 was that you proceeded or you continued your negotiations with Vickers-Krebs for the purpose of trying to arrive at an arrangement for joint exploration of the platinized titanium anode, is that correct?

A. That's correct.

Q. But no work was in effect done in your own laboratories of building a prototype of that anode?

[fol. 2114] A. Except perhaps for design work at a desk. To the best of my knowledge, no work was done in the laboratory or in the pilot plant to construct a prototype cell.

Q. The recommendation here was made in May 1959 and your negotiations with Vickers lasted through the balance of '59, is that correct, sir?

A. I believe so.

Q. During this period of time, didn't you become anxious about the delay in proceeding with a prototype cell?

A. It's only natural that I would.

Q. Why was it that Olin did not during this period go ahead on its own rather than rely on unsuccessful negotiations with Vickers?

A. Simply because we felt we could move faster if we brought in a concern that had a thorough knowledge of chlorate production and the conventional cells being used which could help us develop a prototype cell incorporating the platinized titanium anodes.

. . . . . .

[fol. 2115] Q. I turn now to Electrochemical Survey Report U-2.501 entitled Summary of Sodium Chlorate Plant Studies. The report is dated July 15 and typed July 20,

1959 and is stamped OD 231. Do you recall the circumstance which led to the preparation of this report, Dr. Wojcik?

A. Offhand, I do not but quite likely Mr. Block requested that it be prepared.

. . . . . .

[fol. 2116] Q. On August 18, 1959 there is a memorandum addressed by you to Mr. Block. The document is marked Olin C 418. Do you have a copy of that before you?

A. I do.

Q. There is a reference in the first sentence of the last paragraph to Vickers-Krebs having little if anything to contribute to cell development and to the favorable approach which Vickers-Krebs personnel took to a joint venture under "our terms".

Could you enlighten us as to both aspects of that sentence? What did you find out about Vickers-Krebs ability to contribute to the cell development program? Then, secondly, what did you mean by a joint venture under "our terms"?

A. I am referring now to a chlorate cell capable of [fol. 2117] utilizing the new platinized anode. It was our thought that they had sufficient knowledge at that time to help us quickly design a cell which would permit us to test out the new anodes and when it developed that they did not have such information then they were more inclined to consider the terms under which Olin was proposing that we jointly develop a cell embodying this new principle of platinized anodes. It is very simple. Our terms, if you refer to some of the documents that were passed back and forth indicated that we wanted Vickers-Krebs to put up the same amount of money as we were going to put up. Initially they objected to this. The feeling on their part was that they already had a lot of know-how that they would throuw into this package and that was worth something. Later it developed they didn't have the specific know-how that I referred to.

Q. When you learned that they did not have the specific know-how that you have referred to for what reason did you continue to pursue the Vickers-Krebs negotiations

rather than starting a crash program or development program of your own to develop the platinized titanium anodes?

A. Vickers-Krebs having built several sodium chlorate [fol. 2118] installations were in a much better position than we were to draw on their background to help design the type of cell that would permit us to test this out. We wanted that information.

. . . . . .

[fol. 2119] Q. Outside of the documents that we have already covered, can you recall—subsequent to your report in the July 1959 division manager's opinion, can you recall any discussions which you had with other people in the company with regard to the proposal to construct a facility at Chattanooga?

A. Offhand, no.

Q. Did you at any time promote or encourage or advocate that a plant be built at Chattanooga?

A. Specifically, no.

Q. What do you mean by, specifically, no?

A. That is that specific location.

Q. Was there another location that you did advocate at any time?

A. I personally never advocated any specific location but I was always anxious for Olin to get into the production of sodium chlorate and, especially if they used a process that research and development had perfected.

Q. Apart from your own associates in the research [fol. 2120] and development department, were there any—do you know of any members of management of the Chemicals Division who agreed with you that Olin's research and development should be effectuated by Olin's construction of a sodium chlorate plant?

A. Well, it's only natural that management would first look to its research department for the development of a new product and new process.

Q. I believe you testified earlier that Mr. Block had upon the receipt of that report dealing with manufacturing of sodium chlorate been quite enthusiastic or favorably impressed with Olin's sodium chlorate research and development and that he gave instructions with respect to pursuing that interest. Can you tell us when Mr. Block, when,

if at all, Mr. Block changed his mind about Olin's entry into sodium chlorate production with Pennsalt rather than on its own?

A. I can't recall the specific dates but I can tell you, it came to me as a surprise and a sudden shock.

Q. And, when it came to you as a surprise, was it at the meeting that you already referred to in late '59?

[fol. 2121] A. Yes, with Mr. Block in his office.

Q. And, it is your testimony that he gave no reasons, he simply told you what the decision had been?

A. That is correct.

Q. Do you recall, Dr. Wojcik, the letter which you wrote to Mr. R. K. Thoman to Vickers-Krebs on November 9, 1959? This document is numbered C-412.

A. Yes, I remember this document.

Q. That letter indicates on its face that a copy was sent to Mr. Block. Had the contents of the letter been previously discussed with Mr. Block?

A. Quite likely.

Q. Would it have been likely that you would have written this letter, giving Olin's assurance in the third paragraph that quote We would give your company a preferred position providing everything is equal to what will be available from others, unquote?

A. Read the question back, please.

(Whereupon, the pending question was reread by the reporter.)

Mr. Barnum: Is it likely that he wrote the letter?

[fol. 2122] Mr. Freed: That he would have written the letter without authority from Mr. Block, giving assurance.

Mr. Barnum: Well, now, I don't know that I want to accept your characterization of the document, giving assurance; certainly, the document speaks for itself in that regard. Is the question, whether of not he consulted Mr. Block before writing the letter?

Mr. Freed: That question is acceptable.

By Mr. Freed:

Q. Would you answer that question?

Mr. Barnum: Would you read that question to him, please?

(Whereupon, the pending question referred to above was read by the reporter.)

A. Quite likely, I did.

By Mr. Freed:

Q. Can you tell us what you meant by the next to the last sentence in the letter where you said, "I feel rather strangely about the benefits which our companies will derive from a joint study?"

[fol. 2123] A. I think there is a typographical error there. "I feel rather strongly about the benefits which our companies will derive from that joint study."

Q. It does make much more sense.

A. Yes.

Mr. Freed: Off the record.

(Discussion off the record.)

By Mr. Freed:

Q. Following that letter of November 9, Dr. Wojcik, do you recall meeting with Mr. Spence of Vickers-Krebs on November 24, 1959, at the Park Avenue office in New York?

A. I do.

Q. And, can you tell us what the result was as indicated by Vickers-Krebs to the proposal or to the basis on which Olin was willing to proceed?

A. In general, they were anxious to work with us and were willing to consider any reasonable proposition.

Q. How close did the company come to an agreement at that meeting?

Mr. Barnum: That's a hard question to answer, don't you believe? It's a characterization of a status and nego-[fol. 2124] tiations, did they agree or did they not agree; it's one thing how close they come to an agreement; I would hesitate to ask my witness.

By Mr. Freed:

Q. If that question can be answered by you, I would appreciate it if you can tell us in your own opinion, how wide the margin was or how close together the companies were in terms of reaching an agreement?

A. We were making progress.

Q. And, can you tell us from that meeting on, just what transpired in your negotiations with Vickers prior to the time that you notified them that the deal was off?

Mr. Barnum: What deal are you referring to, Mr. Freed?

Mr. Freed: The contract towards which the parties had been negotiating.

A. You are referring to the Vickers-Krebs deal?

By Mr. Freed:

Q. To the negotiations which you had, of carrying on with Vickers-Krebs, looking toward a joint development program on sodium chlorate cells.

A. It hinged on two things; one was our trying to get [fol. 2125] Vickers-Krebs to contribute some funds for this development and Vickers-Krebs wanted some assurance from us that they would get the opportunity to build a sodium chlorate plant and I think that the records speak for themselves as to what position I took on giving them a preferred position.

Q. On January 26, 1960, you wrote a letter which is now marked Olin C-406 to Mr. Spence of Vickers-Krebs in which you stated that some complications had arisen at our end. Can you tell us what that letter was referring to?

A. I am not certain but it seems to me that at that time I was pushing for an answer from Mr. Block as to whether we should proceed or not with these negotiations at some more rapid pace and it seems to me that he indicated he is not at that time prepared to discuss the subject matter with me.

Q. At this particular—the point at which you were writing this letter, you had already received Mr. Block's instructions, concerning the—Mr. Block's information, concerning the—Mr. Block's information, concerning the Pennsalt joint venture, is that correct?

A. I believe that is correct.

[fol. 2126] Q. And, at this time were you still attempting to have Olin proceed with the Vickers-Krebs negotiation, even though Olin was going to be engaged or despite the pendency of the Penn-Olin project?

Mr. Barnum: That letter is quite to the contrary; you asked him if he disavowed the letter.

Mr. Freed: No; I am asking the witness what he attempted to do within the Olin organization which actually is reflected by this letter; I believe that Dr. Wojcik has just testified that he wanted Mr. — that he wanted permission from Mr. Block to proceed with Vickers-Krebs despite the Penn-Olin negotiations, is that correct, sir?

A. That is right.

By Mr. Freed:

Q. And, was any reason given to you by Mr. Block for requiring that you terminate the Vickers-Krebs negotiations?

A. I don't recall any reasons given at this time; my personal feeling was that even if an agreement had been consummated with "Penn" on the formation of Penn-Olin, anything that we would come up with as a result of our joint venture with Vickers-Krebs might be useful in a new [fol. 2127] installation, so naturally, I was anxious to proceed with the rest of this development.

Q. Did you learn at any time subsequent to this letter what Mr. Block's reasons were for asking you to terminate the negotiations with Vickers-Krebs?

A. Yes.

Q. And what was the reason?

A. I don't recall Mr. Block told me that; whether I was told by Mr. Block or whether I read it in print first that Penn-Olin was being formed.

Q. I believe, sir, that you testified that before you wrote this letter, you knew that Penn-Olin was being formed and I don't quite understand your answer insofar as——

A. I can explain that. My reference to Penn-Olin previously had been on the basis that I heard there were discussions and shortly after I had written this letter, I realized that Penn-Olin has been formed; does that clarify this situation?

Q. Yes, sir; thank you, sir.

Mr. Barnum: Excuse me. By, Penn-Olin being formed, you are referring of course to there having been an agree-

[fol. 2128] ment between Penn-Olin and Pennsalt to form a joint venture?

A. Again, I say, I am not sure whether I heard that from Mr. Block or whether I had seen it first in print, in a magazine or a report of some kind.

By Mr. Freed:

Q. Did there come a time after the writing of this January 26th letter when you did tell Mr. Spence that negotiations were terminated or that you communicated with him on the subject matter of this letter as indicated in the third paragraph what you planned to do?

A. I don't recall having said anything to Mr. Spence; I assumed he would have seen the decision made by Olin in print and didn't think it was necessary for me to say any more about it; however, again, I repeat, I still would have likely gone ahead on the development of a chlorate cell, incorporating platinized anodes.

. . . . . .

[fol. 2129] Q. Dr. Wojcik, the recommendation which your department made in mid 1959 as reflected by division management meetings, was that Olin consider a 15,000-ton per year sodium chlorate plant. To the best of your knowledge and apart from any consideration of platinized titanium anodes, would Olin have been able to embark on the commercial production of sodium chlorate in that quantity if a suitable occasion were found?

A. Disregarding profits?

Q. No; just disregarding the technological problems in connection with the platinum anode; in terms of technical competence to engage in the business?

A. I think I have already stated that if life depended [fol. 2130] on it, the answer is yes, we could have gone ahead; now, whether we would make any money producing sodium chlorate, that's something else; all of our reports have indicated that it was rather marginal until we started talking to people like Vickers-Krebs, it helped us realize what some of the problems are that we were concerned

with and it was not necessarily as serious as we had thought.

Q. I don't understand what your are referring to, problems that were not as serious as we thought. Could you spell that out for us, please?

A. Yes; I had referred to problems involving corrosion, involving the consumption of the carbon anode and yields; we had no sound basis on which to evaluate how these things would change in a large installation and it wasn't until we started talking to people like Vickers-Krebs that they gave us some data which made us realize that it may not be as serious as we initially thought it would be.

Q. If those problems were not as serious as you had initially thought, why then do you raise a question as to the economic feasibility of Olin's entry into the sodium [fol. 2131] chlorate production?

Mr. Barnum: This is as a technical matter or as a business decision?

By Mr. Freed:

Q. As viewed from your position as head of research and development?

A. We didn't have the detailed information necessary to design and construct a sodium chlorate plant; however, after talking to Vickers-Krebs, we had some assurance that this could be a profitable venture for us but, mind you, again I say, we didn't have the detailed experience—we didn't have the experience; we didn't have the background; I'm specifically referring to our economic studies.

Q. Was Vickers-Krebs willing if a satisfactory agreement could be reached, to construct an entire sodium chlorate plant for Olin?

A. Yes.

Mr. Barnum: Satisfactory to whom?

Mr. Freed: The party.

Mr. Barnum: In other words, if Vickers and Olin entered into a satisfactory agreement, Vickers was willing [fol. 2132] to carry out their part of the agreement, is that the question and answer he has to conclude?

By Mr. Freed:

Q. Dr. Wojcik, as you viewed Vickers-Krebs' offer to Olin, was Vickers-Krebs capable of building for Olin a commercially usable, commercially feasible sodium chlorate plant?

A. I believe they were; I would, however, like to refer to statements that I have made previously wherein it was my feeling a concern like Pennsalt who was in the production and had one of the newest plants going and had more up-to-date information than Vickers-Krebs.

Q. Did you state that in your belief Pennsalt did have more information than Vickers-Krebs?

A. I felt that that was so, yes.

Q. To your knowledge, has Vickers-Krebs built any sodium chlorate plants for itself or for anyone else within the last five or ten years?

A. I don't recall offhand.

Q. Does Vickers-Krebs enjoy a reputation for being a competent contractor for the construction of Turnkey [fol. 2133] sodium chlorate plants?

A. I believe that is correct.

Q. But, are you saying that you do not know, you could not know whether that reputation is a current reputation or is only a past reputation?

A. That is correct.

Q. Did you personally have any doubts about Vickers-Krebs' capability of building a commercially feasible sodium chlorate plant for Olin?

A. Disregarding profits, I would say I had no doubt about their ability to build a commercially feasible chlorate plant.

Mr. Barnum: What, Mr. Freed, may I ask is a commercially feasible chlorate plant?

By Mr. Freed:

Q. Dr. Wojcik, you have used the term; how would you define the term as you have used it in your testimony?

Mr. Barnum: He used it in response to your question.

Mr. Freed: I think it's the witness' definition of words that he used that will constitute the evidence in this case [fol. 2134] and not the testimony of counsel.

Mr. Barnum: Let's hope so.

A. I can answer that by saying, in my opinion, a commercially feasible chlorate plant would be one—could make a product and make it at some profit, not necessarily the highest profit.

By Mr. Freed:

Q. Did Mr. Block or anyone in the higher management echelons of Olin at any time indicate to you that they did not wish to proceed with Vickers-Krebs because of doubts concerning Vickers-Krebs' ability to build Olin a commercially feasible plant?

A. No one to my knowledge, Block or other people in management doubted the fact that Vickers-Krebs could put up a going plant.

Q. At any time during your own responsibilities at the sodium chlorate and research and development program, was any question raised concerning 15,000-tons per year as a commercially feasible size of sodium chlorate plant?

A. No.

Q. We have—we referred several times in today's dep- [fol. 2135] osition to Mr. A. J. Holmes who was the author of several Electrochemical Survey Reports. What was his position in your department during the time that he was working on these reports?

A. He was an electrochemist reporting to Dr. Gardiner.

Q. Approximately how long was he employed by Olin?

A. I don't recall the exact dates; it might have been four years and, I am sorry to say, I can't tell you whether he is still with us today or not.

Q. In the economic portions of the Electrochemical Survey Reports which we have discussed today, were the economic studies made under your supervision and by your department?

A. That is essentially correct.

Q. And, in the normal development of technological and economic studies for the development of a new product by Olin, did your department have responsibility for the economic studies as well as the technological work?

A. That is correct; we, of course, did not have sole responsibility; some other department as for example operation itself might check our findings in our reports.

[fol. 2136] Q. As you look back on the research and development work done under your supervision in the years 1955 to early 1960 on sodium chlorate, why didn't Olin achieve the development of a satisfactory chlorate cell?

A. Because we did not go ahead and confirm our laboratory findings in the pilot plant; there's quite a difference between results which you find in the laboratory as compared to how the reactions are going to behave on a large scale; we never got to the point where we put up the pilot plant to prove out these laboratory findings.

Q. During your ten years as head of the research and development department, have you successfully pioneered from Olin's point of view the development of other new chemicals, of any other chemicals?

A. Yes.

Q. Can you give us an example?

A. Pentachloronitrobenzene.

Q. Did the development of that chemical involve a pilot plant operation?

A. It certainly did.

* * * * * * *

[fol. 2137] By Mr. Freed:

Q. Can you isolate for us, Dr. Wojcik, the circumstances that—strike that. Can you fix, Dr. Wojcik, a time between [fol. 2138] 1955 and 1960 when from a research and development joint of view you were prepared to embark on a pilot plant sodium chlorate operation?

A. I can't fix the exact date but after we had demonstrated in the laboratory that the platinized anode looked promising, we were recommending that we be permitted to pilot plant that development and at that particular time is, I recall the period when we were rather anxious, speaking for the division now, to get into the chlorate production and we didn't feel that we would have the time necessary to go through a pilot plant development; that is why we were seeking help on the outside; when I say, help on the outside, I was referring specifically to the joint venture with Vickers-Krebs in the development of a prototype cell.

* * * * * * *

[fol. 2139] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 407

Baltimore, Maryland.

EXCERPTS FROM DEPOSITION OF JOSEPH LEONARD WOOD
TAKEN ON SEPTEMBER 7, 1961

* * * * * * * *

[fol. 2140] AFTERNOON SESSION

1:30 p.m.

Whereupon, JOSEPH LEONARD WOOD, took the stand, and, being duly sworn, was examined and testified as follows:

Direct examination.

By Mr. Copley:

Q. Will you state your name and address for the record here?

A. Joseph Leonard Wood, 33 Wendslow Road, Lutherville, Maryland.

Q. What is your present employment with Olin Mathieson?

A. I am Electrochemical Engineer, Project Manager in the construction of a plant.

Q. Did you say, of a plant?

A. For a plant which is now under construction.

Q. And what plant is that?

A. Charleston, Tennessee location.

Q. What plant are you constructing in Charleston?

A. It's an alkali-chlorine plant.

[fol. 2141] Q. Alkali-chlorine plant? That is a plant which produces what products?

A. Caustic chlorine.

Q. Sometimes known as a chlor-alkali plant, that's the term we used yesterday?

A. Yes.

Q. As Electrochemical Engineer, are you assigned specific plants to work on until the completion and then go on to another project?

A. That's essentially correct, with, some follow-up work where problems occur in my particular field of competence.

Q. Aside from your role in the construction, in follow-up work of the plant, what duties do you perform as an Electrochemical Engineer?

A. Essentially trouble shooting; certain problems that occur on efficiency, safety, consumptions, to go in and assist the local management.

Q. Then, your activities might take you to any number of any one of Olin's plants around the United States?

A. At one time or another, I have been at almost all [fol. 2142] the plants.

Q. I see. When will the alkali-chlorine plant be completed at Charleston?

A. I concede for you to call it an alkali-chlorine plant—we are shooting for a target date of February.

Q. Of 1962?

A. '62.

Q. During your employment at Olin, when was the first time you did work concerning sodium chlorate?

A. The first work—if you define work as paper work, in other words, calculations rather than physical work, I would say sometime around 1954 is the first I remember making any type of review of technology.

Q. And what was the review you made?

A. Essentially Olin's available literature.

Q. What was the purpose of your review in 1954 of this literature?

A. The continuing interest that we have in all of the electrochemical processes.

. . . . . .

[fol. 2143] Q. Do you recall what conclusions you reached [fol. 2144] after your study of the material in 1954?

A. The first conclusion I reached on chlorate was, any chlorate plant must be placed in a low-power cost area and that is very, very much so today.

. . . . . .

[fol. 2145] Q. And, what was the work you did in late '57 or early '58?

A. I think, as I said, this work was just strictly reading and perhaps giving an opinion to management, was to review some work that had been done in the research and development with respect to potential sites in which a [fol. 2146] chlorate plant could be situated.

Q. Do you recall what work and material that was that you reviewed?

A. I am almost positive that the first one was comparing possible location in Saltville with the possible location at McIntosh, McIntosh being in Alabama, Saltville in Virginia.

Q. And, what were your conclusions after studying this material as to the relatively—as to the relativity of Saltville and McIntosh?

A. The—there was not too much to choose between the two areas; both of them were poor pay-out plants.

Q. In what respects were they poor pay-out plants?

A. They were outside the TVA power area, and at such, the power costs were very, very high.

Q. Was cost of power at this time a primary consideration in your mind?

A. The cost of power to make chlorate is almost *the* primary consideration, assuming reasonable freight and so forth and so on.

Q. In so far as the question of freight is concerned, [fol. 2147] out of Saltville and McIntosh——

A. My memory is—in fact, I know McIntosh is slightly preferential on freight.

Q. Is the distinction a significant one?

A. Well, if a project is not a good pay out, every difference becomes significant, or if it is marginal.

Q. After you had reached these conclusions, what recommendations did you make?

A. At that time,—I made a number of serious, very serious studies on chlorate locations and reviewed others—made by others and came to two conclusions, that it had to be a plant in the East, it had to be located in the TVA area, it had to be connected with an existing chemical plant.

Q. What are the factors that make it necessary that a sodium chlorate plant be connected with another existing plant?

A. Well, this, of course, you realize is a technical opinion of mine.

Q. Yes.

A. As a result of calculations and, I am sure you will [fol. 2148] get other people to disagree—but these plants are not high tonnage plants and as a result to have the type of management which we insist upon at every location, you just don't have enough production to carry the overhead; it is a question of insufficient real dollar value to absorb a lot of overhead.

Q. Does it make any difference to what type of plant a chlorate plant is connected?

A. Well, there are obvious savings in connecting it with any type of existing plant but to obtain the maximum savings, it should be preferentially—this is preferential, next to an existing electrolytic plant, you would obtain maximum savings that way; the next maximum savings against connecting with an electrochemical plant would be with any chemical plant then of course, the last is just connected to a location where you might have personnel or existing change houses or stuff like that.

Q. Could you clarify the question in my own mind. Give us some examples as to an electrolytic plant; does an electrolytic plant cover many types of plants?

A. Well, electrochemical is a little bit more specific than the electrolytic; for example to make—in this case, of [fol. 2149] course, sodium chlorate, to make chlorine and caustic soda, you also consider that as an electrolytic plant, to make fluorine, which is a project of current interest; they are all made by the electrolytic process, in that they are using a salt; of course, others which are similar is the electrolysis of magnesium chloride—that is a molten electrolysis; the electrolysis of molten sodium chloride gives you metallic sodium and chlorine; the electrolysis of alumina dissolved in cryolite—I can go on and on and on.

Q. In other words, the electrolytic process is the one that is widely used in a number of different chemical plants?

A. Exactly.

Q. You mentioned that you have been giving the question of location for a sodium chlorate plant serious study for a number of years and you outlined your two conclu-

sions; did you reach these conclusions when you first initiated your studies?

A. They came very shortly after it, yes.

Q. And, this has been your unaltered position?

A. I have not changed that, no; they just overshadow [fol. 2150] freight considerations to a great extent; of course, freight comes into it, but you can afford to ship it rather than produce it outside of a low cost power area.

Q. After your review of Saltville and McIntosh in late '57 and early '58, what were the next locations which you considered?

A. In the TVA area; the only corporate installation in the TVA area was one at Chattanooga; it was—it's a metal processing plant and I looked at that very closely to try and take advantage of what existing facilities might be available, even though it was not a chemical plant.

Q. And, what were your conclusions with regard to Chattanooga?

A. It was better than Saltville or McIntosh but still not a fantastically good pay out.

Q. Following your studies of Chattanooga, did you make any recommendations to management?

A. Would you explain what type of recommendations you are referring to?

Q. Well, I think you stated that Chattanooga was better than Saltville or McIntosh but still not a fantasti- [fol. 2151] cally high pay out; in the light of these conclusions, I would just like to know what recommendations?

A. Well, you must remember that my position is essentially technical and I do not go, running around advising management that they build a plant or telling them that they ought to be able to sell it and so forth; essentially, I present the facts that—sticking out my neck—that such and such a plant would cost so much money; the production unit, production cost would be so many dollars per ton in this case and that; on that basis, I would usually have information given to me on expected freight cost against such a location and on that basis, I would simply indicate that we can expect such and such a return on our money.

Q. And, did management call on you to present such recommendations?

A. No.

[fol. 2152] Q. At that time, could you give us an idea of where you fit in the organization or structure of Olin Mathieson?

A. At that time?

Q. Yes, sir, at that time.

A. I was, prior to—just prior to '58, I was plant manager for the McIntosh plant in Alabama and had—was moved to Baltimore as Electrochemical Engineer, essentially to study new plants which the corporation was planning.

. . . . . .

[fol. 2153] Mr. Copley: The document to which Mr. Wood has referred to is from Dr. Wojcik to Mr. Hightower, dated July 23, 1959 and stamped, Olin C-395 "Wood".

I would like the reporter to mark this for identification purposes as Plaintiff's Wood Exhibit No. 1.

(Whereupon, the document referred to above was marked Plaintiff's Wood Deposition Exhibit No. 1, by the reporter.)

. . . . . .

[fol. 2154] By Mr. Copley:

Q. Mr. Wood, at about this time, mainly July or August of 1959, did you prepare a written report reflecting your observations on these Chattanooga studies?

A. No, I do not recall writing a specific report; I am almost sure that any reports I gave were verbally, face to face.

Q. And with whom did you speak?

A. It would be with Mr. Lewis or with Mr. Hightower.

Q. Do you recall what you said to either of these gentlemen?

A. I recall no specific meeting, no; you must recall, I am—you must understand that I would meet with these people maybe half a dozen times every single working day.

Q. During the course of your contact with them, did you give the recommendations or conclusions based on your studies?

A. Most surely, I did.

Q. Could you tell us what the substance of your conclusions were?

A. Yes; the—in general, the research estimates—fol-
[fol. 2155] lowing most research estimates, were highly optimistic; specifically, that—from the research reports and work which I verified, the plant must be in an existing low-cost power area plant with adequate supervision; the overhead would be too high for a plant to be located off by itself; also under consideration was to make what we call "chemical chlorate" simply by using gaseous chlorine; my study and figures showed that to be uneconomical; it would be in effect downgrading chlorine.

Q. When you talked to Mr. Lewis and Mr. Hightower, did you say anything specific with reference to Chattanooga?

A. I would have specifically had said that of the sites under study and consideration Chattanooga was the most favorable.

Q. Is it correct that the only sites which Olin has considered since late '57 are Saltville, McIntosh, and Chattanooga?

A. I can't recall any other sites that have been seriously considered.

Q. Do you recall in what respects the reports of research and development were highly optimistic?

[fol. 2156] A. I feel in amount of capital required and overhead; however, consumptions were accurate, cost of raw materials, these costs were accurate and if I also recall correctly, labor costs were reasonable.

Q. What do you mean, consumptions were accurate?

A. Such as the amount of power required, the amount of salt required, raw materials.

Q. You mentioned that you evaluated the possibility of producing sodium chlorate, "chemical chlorate"; would you elaborate on the considerations at that time?

A. One time, we had an excess of chlorine at Saltville; you can, by taking gaseous chlorine and blowing it into a solution under controlled conditions end up with sodium chlorate; however, to do it economically, you are in effect—I don't mean economically, I mean to do it—you are in effect downgrading the value of chlorine and if you consider that you can sell the chlorine on the market, you have a double investment; to make a single sale of a product

which is already in a saleable form, so that was dropped.

Q. Could you give us the dates on which it was considered and dropped perhaps by referring to your records?

[fol. 2157] A. Not by referring to the records; however, I have discussed it on several occasions with Dr. Gardiner.

Q. Are the records which you would need, do you have them there? Feel free to refer to them.

A. The question is, do I recall when I exactly discussed "chemical chlorate"?

Q. Yes, sir; when this was under consideration?

A. This most definitely must have been in the very early stages of our—of our serious consideration of a plant that I would say probably in '58.

Q. Were there any reports written on the relative merits of producing chlorate chemically or evaluating the chemical process by which you would produce chlorate?

A. I am almost sure there was a research report probably a year earlier in which someone was trying to really more than make chlorate, perhaps to come up with a process which would not downgrade chlorine too much when it was in excess; see, in a chlor-alkali plant, you make 1.1 tons caustic, sodium hydroxide; for each ton of chlorine chemicals of this nature—if you produce them, you must sell them; on occasions, when you say you can sell all your caustic, what to do with your chlorine if you can't sell [fol. 2158] it? So, it has been a long research and development problem, continuing all through the years as to alternate products that you can change one or the other, into when the market is not balanced.

* * * * * * *

[fol. 2159] Q. Did Mr. Hightower or Mr. Lewis ever question your statement that consumption at Chattanooga location was accurately portrayed in these reports that you stated?

A. I—I do not recall that—on any occasion that they doubted the accuracy of my information on this subject, no.

Q. Did Olin give serious consideration to producing chlorate by the chemical process which you described?

A. Not sufficient consideration to do any development work to my knowlege.

Q. You mentioned previously that you and Dr. Wojcik had collaborated on certain investigations; did any of these relate to sodium chlorate?

A. No.

Q. Did——

[fol. 2160] A. Unless, he requested my specific opinion of mathematical or cost figures but we did no specific collaboration with respect to, should we do research work, should we do development work, should we purchase the process or anything of that nature.

* * * * * * *

Q. You referred a moment ago to your statement around July or August of 1959, that the capital requirement figures which you had studied were too optimistic?

A. Yes.

Q. Could you direct our attention to which figures you are speaking about?

A. They were the figures in one of the research reports; I think it was economic location and in going over these figures, in these reports, the figures were sufficiently accurate for comparing the benefits of one location versus another but to use my phrase, "they didn't count the nuts and bolts to give you an operating plant", so that the actual total capital dollars would have been considerably [fol. 2161] higher, higher than any shown; however, they would have gone up uniformly for each occasion so that for comparison purposes, for a preliminary study, I—they were perfectly satisfactory but for a true picture of the total dollars involved in such an undertaking, they were low.

Q. Mr. Wood, would you direct your attention to plaintiff's Wood Exhibit No. 1, which lists four electrochemical surveys and perhaps by looking at this document you can tell us the particular study about which you commented?

A. It was probably parts of all of these.

Q. Then, in summary, you felt that the capital requirements were too optimistic in each of these reports. Did you ever prepare a revision of the capital requirements of the sodium chlorate plant after this study?

A. These reports were sufficiently interesting to show that management might be interested in such a plant; to

go further, you must do what we call, make a definitive engineering study, whereby you actually make certain preliminary drawings for a known site and that would have been the next step and—well, I am not, specifically on record in writing with the company somewhere, or having recommended such a step; I would certainly recommend such a step before proceeding to request moneys to build a plant based on information in this type of report that we have been referring to.

[fol. 2162]

Q. Was such a step recommended, is that your testimony?

A. I do not—as I say, I do not recall going on written record, but I would assure you if asked, I would recommend that a specific engineering study be made from which a definitive estimate could be made.

Q. Has Olin ever prepared a definitive engineering study relating——

A. No, separately, no.

Q. Not separately, you mean?

A. We did it in conjunction with Penn-Olin by United Engineers.

. . . . . .

[fol. 2163]

Q. After you had conducted your studies on Chattanooga during '59—July or August of 1959, when were you next asked to make a study regarding the possible sodium chlorate facility?

A. I do not think I made another study until we were actively working on the Penn-Olin project.

Q. What date do you have in mind when you began working on the Penn-Olin project?

A. Early '60.

Q. Between July or August of 1959 and, in the time you commenced working on Penn-Olin in early '60, did you do any work at all on sodium chlorate?

A. I made many estimates, and the only estimate I recall making was, assuming the research capital figures were accurate—I recall making an estimate showing a hypothetical case of a chlor-alkali plant and a chlorate plant in a low cost power area.

Q. Was this a written report that you prepared?

[fol. 2164] A. No, it would be merely a study.

Q. Was there any particular location which was chosen for the hypothetical case——

A. TVA Area.

Q. That generally——

A. On water at least with the restriction that I put in the hypothetical case to show that my contention that the best economics would occur when there was a chlorine plant, that it would be on water, and that it would be in the TVA Area, and that if those three considerations were met, a new chlorate plant could still be a competitive unit even in such a highly competitive market as chlorate sales.

Q. Were there any other assumptions on which you based your hypothetical?

A. I used basic cost figures for the—for the Tennessee Area having had fairly good information on unit labor costs in that area.

Q. And where did you acquire those figures?

A. It is, of course, my job to know relative labor costs in various parts of the country; I undoubtedly obtained these from our plant in Chattanooga.

[fol. 2165] Q. Did you have any conversations with anyone regarding this hypothetical situation in your conclusions about it?

A. Oh, I am positive that I pointed it out that for a chlorate plant to be successful, that it must be in the TVA Area, it must be on water, and it should be associated with a chlorine or other chemical plant, preferably a chlorine plant.

Q. Do you recall with whom you spoke?

A. Not specifically, no.

Q. Did you talk with Mr. Logan?

A. It could have been direct to Mr. Logan; most assuredly I spoke with Mr. Lewis and Mr. Hightower.

Q. What were their comments on your recommendations?

A. Well, these are not recommendations in my opinion; they are——

Q. Conclusions?

A. Conclusions, based on calculations.

Q. And, what were their comments about your conclusions?

A. They accepted them; they should not—we should [fol. 2166] not consider a chlorate plant all by itself; it just would not pay out.

Q. And, did they accept your conclusions about the location of a plant in the TVA Area and on the water?

A. Yes.

Q. Do you recall who asked you to conduct such a hypothetical survey?

A. Probably no one. It's my job to be in a position to know the best places or it could have been a suggestion from our sales group; it's difficult to say because I make many of these.

Q. Do you recall the months in which you made these, during the period of——

A. No, no, I'm not at all positive.

Q. Do you recall whether it took place in 1960, subsequent to July or August?

A. No, it would be prior to '60; I am positive, well prior to '60.

Q. So, to the best of your recollection, it was sometime subsequent to July or August of 1959, but prior to——

[fol. 2167] A. My recollection is that it was in '59, and it could have been prior to July; it could easily have been.

Q. Mr. Wood, are you familiar with the Whither Reports, the original report and the revision of 1959?

A. I attended one Whither meeting; I think it was the '60 meeting.

Q. Are you familiar with the fact that—strike that question.

Are you familiar with the fact that in the original Whither Report in 1959, Olin had projected a chlorine caustic plant at McIntosh, and a sodium chlorate plant also at McIntosh?

A. Yes, sir. I worked on all those figures.

Q. And, are you——

A. But, the pay-out on the chlorate was not good from the standpoint that there—the capital figures were not the results of a definitive engineering study.

Q. Are you likewise familiar with the revision of the Whither Report, I think in October of 1959 which projected a chlorine caustic plant at Chattanooga and a sodium chlorate plant also at Chattanooga?

[fol. 2168] A. Yes.

Q. Do you know what caused this shift in the Whither Report?

A. The shift—the reason for shifting the location must have been, I am sure, is outside of my competence to answer; it was undoubtedly a sales position.

* * * * * * *

By Mr. Copley:

Q. Mr. Wood, is the chlor-alkali plant at Charleston for which you are now Project Manager the same chlor-[fol. 2169] alkali plant that was initially projected to be at Chattanooga?

A. No, there are a number of differences.

Q. Could you spell those out for us, sir?

A. The size is larger; it involved additional capital because there were no facilities whatsoever available to start with; its position as a site, actual physical site is more favorable than that in Chattanooga; Chattanooga was turned down because there was no room for expansion.

Q. When was Chattanooga turned down?

A. I can't say other than in our own discussions we felt that we would be stimying ourselves, we would be saving dollars but we would be stimying ourselves in the future because of the limited real estate available within the city.

Q. And was the availability of the real estate the primary consideration to move your site from Chattanooga to Charleston?

A. It was certainly one of the major ones.

Q. You stated, sir, that you did not recall when the [fol. 2170] change took place. Can we put some outside limits on that, between August of '59 and early '60, would that be an accurate time space?

A. I simply can't recall the exact date.

Q. What was the nature of your work which you were asked to do with respect to the Penn-Olin venture?

A. Essentially that of technical representative for the Olin portion of Penn-Olin.

Q. With respect to the potential occasion for a Penn-Olin plant, what duties were you asked to perform?

A. Essentially to be sure that the various economic considerations were fully covered; as I recall, we came to the conclusion that if we considered a location for a plant to be built for Mathieson in the future versus an existing Pennsalt plant, the timing—it would mean that the plant could not be built for "X" months later than one being constructed at the plant already in existence; I recall that there was a slight freight favor for East Tennessee over Western Kentucky; other than that, on the site location, that essentially completed my field of it.

Mr. Copley: Off the record.

[fol. 2171] (Discussion off the record.)

By Mr. Copley:

Q. In your last answer, was your reference to some plant to be built by Olin Mathieson, to be built in the future?

A. Assuming that Olin built a plant which they hoped to build someday in our expansion of our alkali chlorine production, we might have a plant in East Tennessee and we had an existing metal plant there which had some facilities which would not have to be duplicated; then, that versus consideration of a Western Kentucky plant and what are the pros and cons, so I would say that the time element would range very very high with such a plant.

Q. As I understand it, Olin had a chlor-alkali plant projected for Chattanooga at that time, is that the plant to which you refer?

A. That is correct; anytime we project one plant, then we immediately project how many other plants can be tied into it to reduce overhead, share overhead.

Q. In your discussions with the representatives of Pennsalt regarding the potential location of the Penn-Olin plant, [fol. 2172] what was said about the possibility of locating the plant in Chattanooga?

A. Absolutely zero—you mean as far as—may I ask clarification of what you mean?

Q. Yes, sir.

A. Do you mean as to whether or not we were going to build a chlor-alkali plant in East Tennessee?

Q. Well, if that were your words, I would appreciate if you would let us know.

A. We would not absolutely let any such words escape; it would merely be in reference to the possibility of location at Chattanooga where we had an existing metal plant.

Q. In other words, you did not announce or disclose to Pennsalt that you had this chlor-alkali plant under consideration?

A. Absolutely not.

Q. What was the reason for non-disclosure on your part?

A. I just don't feel that has to be explained.

Q. Mr. Wood, we would appreciate it if you would ex- [fol. 2173] plain the reason that Olin did not want to disclose the plans for a chlor-alkali plant.

A. We are competitors in the chlor-alkali field and I just don't feel it requires an explanation; I feel it's so self-evident, we just couldn't allow our corporate plans to become public knowledge prior to the proper time for disclosure.

Q. When did construction begin on the chlor-alkali plant?

A. It began in December—actually in November of '60; that's physical field work.

Q. Do you recall when the earliest announcement of that new plant was made?

A. It was made slightly prior to that; I think it was in November, could have been in September.

Q. Do you recall, Mr. Wood, when the decision was made to construct the Penn-Olin plant at Calvert City?

A. It was early '60.

Q. Could you enlighten us as to why disclosure to build a chlor-alkali plant would be prejudicial to Olin; I haven't been in the industry to know why it would be so; it might [fol. 2174] be quite obvious to you.

A. It is very obvious to me; again, a lot of the reasons are outside of my field; it could affect sales contracts if we announced that we were going to build a plant, for example, prior to obtaining the land, you can rest assured that the price of land would be suddenly tripled; if there were problems with connecting—with obtainng road construction, for example, it's that simple. If the plant is built and in operation, you are going to build your own roads. A community will frequently build a road if you are going to locate a plant there and it's still in doubt; there are just hundreds of reasons of that nature; a pre-

mature disclosure could seriously affect you; other than that, competitive reasons also.

Q. Well, confining yourself to the way it might affect Olin in its relation with Pennsalt as a competitor, could you further enlighten us on the way at which this disclosure to Pennsalt rather than the disclosure to the general public could affect Olin's position in the chlor-alkali field?

A. Specifically, no.

[fol. 2175] Q. Could you give us a general idea?

A. In general, they would not keep it as confidential as we would; they wouldn't have the reason to; you could visualize the information reaching a competitor who is just about wondering whether he should double the size of his plant; he could double the size of his plant six months to eight months prior to our being able to construct a grass roots plant; other than that, in the natural reluctance for the corporate information to ever escape prior to public announcement or——

Q. Was this a situation of natural reluctance on the part of Olin or were there specific discussions within Olin which led to the instructions not to disclose?

A. We had specific instructions never to disclose to anyone corporate plans.

Q. But, there were no specific instructions with regard to Penn-Olin?

A. No.

Mr. Barnum: Penn-Olin?

By Mr. Copley:

Q. Or with regard to the Penn-Olin-Pennsalt negotia-

[fol. 2176] tions?

A. I don't feel that I would have been in the working organization for this group had my superiors felt they even had to warn me to keep quiet.

Q. Mr. Wood, did any other factor aside from the time element affect the choice of Calvert City over other possible locations?

A. Certain other costs would be higher in Chattanooga such as salt, if you ask me. It would have to be transported further; I feel that those are the essential—the essential offsetting factors.

Q. Were calculations made which reflect this difference in cost in salt?

A. It was definitely calculated in figures, yes; my recollection, it's almost a dollar a ton difference.

Q. In favor of——

A. Calvert City.

Q. That was the difference in per ton price you gave us?

A. Yes.

• • • • • • •

[fol. 2177] Q. Mr. Wood, do you recall the meeting held in New York on August 1st, 1960, which was called by Mr. Osborne?

A. Yes; I think that is the one I attended, August 1, [fol. 2178] 1960—that is right.

Q. Do you recall at that meeting any discussion of the contribution that Olin had made to the process that Penn-Olin would use in its plant?

A. You must realize that the process we are using is essentially a Pennsalt proces in its entirety; other than that, for certain engineering help in specific information on new equipment, it is essentially a Pennsalt process; if you want to ask—if you had any specific point in mind, I would be glad to tell you just how we contributed on this specific item.

Q. I am interested in determining just what Olin contributed to that process in the way of engineering, help or advice or in any other way in which it had contributed; I don't want to get down to specifics.

A. Well, for example, in the selection of the exact equipment for material, solids installed in conveyors; at that time, Mr. Ed Lopker was Vice-President of engineering for Olin with a terrific background in solids handling; he made an excellent suggestion on how to install the conveyors which, of course, only time will show how good this is but in my opinion, was a real assistance in being able [fol. 2179] to move material with less degradation due to friction of the finished product.

Q. Do you recall any other—strike that question. Do you recall any contributions that you made to the process?

A. Yes; I had specifically completed a study of up-to-date information on rectifiers and although I am not an

electrical engineer, I still had the—some of the latest information at my finger tips, perhaps more so than anyone else in the group at the time; I was also of help in determining the true capacity of the plant from Pennsalt's own information.

Q. The study of the rectifiers which you conducted, were these recommendations used?

A. They received consideration in the type of electrical circuitry we employed; the true design though was made by a Pennsalt engineer.

Mr. Copley: I would like the reporter to mark as Plaintiff's Wood Exhibit No. 3 a document entitled Penn-Olin Chemical Company, Capital Appropriation Request, revised August 29, 1960.

Inasmuch as the document, the pages are black, would [fol. 2180] the reporter mark it on the back of the first page, Plaintiff's Wood Exhibit No. 3.

(Whereupon, the document referred to above was marked Plaintiff's Wood Deposition Exhibit No. 3 by the reporter.)

By Mr. Copley:

Q. Could you tell us what this document is, sir?

A. This is what is referred to in Olin Mathieson as a Capital Appropriation Request.

Q. Do you know if the same persons who prepared the original of this document also prepared the revision on August 29, 1960?

A. Most likely, yes.

Q. You participated in the preparation of both of these documents?

A. I did.

Mr. Copley: I am referring to the group of persons listed in the Olin's response to interrogatories, 78. Mr. Barnum, do you know if those are the same people who participated in the preparation of this revision?

[fol. 2181] Mr. Barnum: I have no information to the contrary.

By Mr. Copley:

Q. On Page 2 of this document is the following statement, "A Penn-Olin technical team survey showed the only reliable technical know-how for sale to be available in Europe". Did you prepare this portion of this CAR?

A. Yes, I did.

Q. And, by this statement which I just read into the record, do you mean that—well, strike that question. Could you explain what you mean by this statement which I just read into the record?

A. It means that the only source from which we could purchase reliable information would be in Europe.

Q. Could you not purchase information from a domestic source?

A. Not in our opinion. not reliable.

Q. Is it your testimony that there is no reliable technical know-how available, domestically?

A. For sale—if you add the "for sale" to that I would agree with your statement.

Q. Did you investigate the possibility of purchasing [fol. 2182] know-how domestically?

A. Directly only from one source, a southwestern engineering company which had information concerning a bipolar cell; we were in doubt as to the reliability of the information, whether it was available to us without legal complications and the information only concerned cell construction alone.

. . . . . .

Q. Was any technical know-how offered for sale to Penn-Olin?

A. Yes, by Krebs.

Q. You are referring to——

A. Actually, the parent company is Krebs.

Q. Was this during the visit of the Penn-Olin technological team to Europe?

A. The definitive estimate rather than the definitive offer was forwarded to us shortly after return to this company but the basic information was given to us in Europe.

[fol. 2183] Q. Was the technology which was made available by Krebs a complete technology, by that I mean, the technology that would cover the entire or virtually the entire sodium chlorate plant?

A. It would cover a complete plant, yes.

Q. What were the reasons which led Penn-Olin Chemical Company to decide against the purchase of this technology?

A. One reason was Krebs had never operated a cell of the size which they offered to sell us; the requirement put on us—when I say "on us" I am referring to the Olin portion of the team, by a former Vice-President of ours, since deceased, Mr. Block—that he was not interested in building a plant with unproven equipment; however, units of half the size they proposed have been built and operated for a sufficient length of time for us to give serious consideration to their proposal; a second consideration—these are all technical points and this is still very fresh in my mind—a second consideration was that the European people had not had experience with American types of salts as raw materials and the method of handling them is considerably different; in Europe, salt is more expensive; frequently, it is obtained [fol. 2184] in a crystallized—recrystallized pure state and as such a lot of your problems disappear; our—furthermore, our careful analyses of the relative cost were such that at 25,000 tons per year rating of the plant we proposed, there was a slight dollar advantage in favor of the Krebs plant; however, we knew that this plant that we were proposing had enough excess capacity to produce 26,500 tons. At that rating, the cost per unit ton, the capital cost per unit ton installed swung slightly in favor of Pennsalt cell.

To me, one of the major points on the Pennsalt cell which appealed to me is that it is simple and very rugged; the European cell was a little bit too fancy and a little bit too gimmicky; one of these cells goes on the line and in this country, well, when one of these cells goes on the line, with our high labor cost, we expect that unit to stay there literally up to two years with just routine inspections and then be renovated and be stuck back there and operate another two years; the Pennsalt cell will do that; the European cells definitely require maintenance repairs every two to three months.

[fol. 2185] Q. Mr. Wood, did Penn-Olin consider using the platinized titanium anode in its plant?

A. At no time was that given serious consideration; it is a development for the future.

Q. I would like to refer your attention to a statement in Plaintiff's Wood Deposition Exhibit No. 3, also on the second page, which states, "The major problem facing any competitor would be entry into the portion of the chlorate market where the present growth is taking place. The growth is in the chlorine dioxide bleaching field which is dominated by the Olin Mathieson patent position and to a minor extent by the Solvay position." Could you tell us, Mr. Wood, in what way Olin Mathieson's patent position dominates that field?

A. Actually, that statement is no longer really one hundred per cent true in that Olin has made its patents available to anyone for chlorine dioxide bleaching. However, it's obvious that if someone is going to install an Olin process, they are going to call in Olin sales servicemen and Olin engineers to assist in starting it up which, very obviously gives you a very good foot in the door for selling [fol. 2186] chlorate.

Q. The last page of Plaintiff's Wood Deposition Exhibit No. 3 in part reads as follows: "Estimated freight equalization (1961-2) $5.83/ton; 1963 on, $5.17/ton on 25,000 tons bulk." Mr. Wood, could you explain for us the difference in these two figures, representing freight equalization?

A. I did not prepare this particular section of this financial analysis, although I was undoubtedly present when it was prepared and I have the explanation of that; that would be based on an expected expanded market that the person preparing the market survey expected that the increased sales would be closer to your plant and in a more favorable freight location than the first sales; those are, you must realize, estimates based on where you expect to sell it and how much freight you will have to absorb to get that material to its destination.

* * * * * * *

[fol. 2187] Q. I see. I would like to address your attention to another statement on Page 2 of Plaintiff's Wood Deposition Exhibit No. 3. It states, "For a competitor to enter

this business studies show that the economic size for a new plant would be in the 20 to 25 thousand annual ton size." Mr. Wood, are you familiar with the recent announcement by Pittsburgh Plate Glass of its construction or proposed construction of a sodium chlorate plant of capacity 15,000 ton?

A. Yes, I am; I am somewhat surprised; however, I will guarantee you that that plant is probably truly larger than that; it is usually customary for companies to understate the capacity of their plants in their public announcements. [fol. 2188] However, having been the person that industrially helped build the original plant of Columbia Southern, I know the power cost which is very very favorable; I also know that they have brine available as a raw material and, at much lower cost than rocksalt which we must purchase and their economics are somewhat unusual.

Mr. Copley: I would like to ask the reporter to mark as Plaintiff's Wood Exhibit No. 4 the document from Mr. Wood to Mr. Logan dated July 21, 1960.

(Whereupon, the document referred to above was marked Plaintiff's Wood Deposition Exhibit No. 4 by the reporter.)

By Mr. Copley:

Q. Mr. Wood, are you familiar with this document?

A. Yes, I am very much so.

Q. Did Mr. Logan ask you to undertake a study of the effect of inflation on the Penn-Olin chlorate phase?

A. This is a standard requirement of ours for estimating the effect of inflation on any proposed plant.

Q. In other words, you do this for all products which [fol. 2189] are in works?

A. For an extermely stable high tonnage commodity such as caustic or chlorine, it is normally not required but for items which are produced and sold in smaller quantities, it is part of our standard procedure to estimate to the best of your ability the effect of inflation.

Q. When you sent this report to Mr. Logan, did you talk to him about it, subsequently?

A. I don't recall; I think the report served its purpose in satisfying him.

Q. Did he indicate any reaction to it?

A. None whatsoever that I can recall; it was satisfactory, I am sure, or I would have heard about it.

Q. Did you yourself conduct this study or did you delegate the responsibility somewhere else?

A. I conducted it myself and since some of the cost would involve Pennsalt practices at Calvert City, I checked with Mr. Woodard of Pennsalt to be sure that my assumptions were in line with his thinking.

Q. What were the practices by Pennsalt in Calvert City that would affect your conclusions?

[fol. 2190] A. Labor contracts; their salt contract, their power contract, their steam contract.

Q. Aside from accumulating this material from Mr. Woodard, did you speak to him about this report?

A. The specific effect of inflation?

Q. Yes, sir.

A. Yes, I did.

Q. And what was the substance of your discussion with Mr. Woodard?

A. As I recall, Mr. Woodard felt that my figure, as I represented it was satisfactory, that he found no major flaws in it and I also recall that he felt that before the five years were out, we would effect enough efficiency improvements to offset this inflation trend, you might say.

Q. Have you reviewed this survey subsequent to its submission to Mr. Logan?

A. You mean, have I made another inflationary survey?

Q. Yes, sir.

A. No.

Q. Are the figures which you list here in the conclusions, [fol. 2191] are they valid today?

A. I would have to study it to be sure but labor is going up at about the same rate; the power contract is only subject to a coal escalation clause; TVA assures me that it is firm within the next five years.

Q. What was the basis on which you predicted a $3.00 chlorine increase?

A. That is from the historic curve that—that have been articles written on the price of chlorine versus the price of caustic and that is strictly an estimate——

Q. Was the price of caustic projected on the same basis?

A. That is correct; I have seen such curves in literature,

in magazines; in fact, there have been several articles recently to the effect that most manufacturers feel that chlorine is underpriced and caustic is overpriced but this is merely printed information, historic price rise.

Q. Did you talk with Mr. Woodard in reference to these particular predictions?

A. No; he would know no more about that than I would. [fol. 2192] Q. Did Pennsalt do their figuring on its own prior to talking to Mr. Woodard or at the time you talked to Mr. Woodard?

A. I do not recall whether Pennsalt has such a standard procedure or not.

Q. In connection with your talk with Mr. Woodard, he made no reference to the calculations made, projecting the effect of inflation such as you made here?

A. I note here that it states in my memorandum that Mr. Woodard would expect to attack this question from the sense of the same viewpoint so, other than that notation, I can only guess that Pennsalt has a similar standard procedure.

Q. Did you subsequently talk to Mr. Woodard about any attack he had made upon this question?

A. No.

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[fol. 2193] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 408

Wilmington, Delaware.

EXCERPTS FROM DEPOSITION OF JOHN O. LOGAN TAKEN ON MAY 15, 1961, AND JUNE 1, 1961

* * * * * * *

[fol. 2194] JOHN O. LOGAN, called as a witness by the plaintiff, having been duly sworn, testified as follows:

Direct examination.

By Mr. Freed:

Q. Would you state your name and address, sir?

A. John O. Logan, 11 Buchanan Road, Baltimore 12, Maryland.

Q. By whom are you employed?

A. Olin-Mathieson Chemical Corporation.

Q. What is your present position with that company?

A. I am Vice-President and General Manager of the Chemicals Division.

Q. Mr. Logan, how long have you been with Olin-Mathieson?

A. Almost thirty years with Olin-Mathieson and Mathieson as a predecessor.

Q. Can you summarize briefly for us your experience with the Mathieson branch of the company prior to the merger?

A. I started in research for approximately six years, in technical service product and market development for approximately six to seven years, in the district sales office for roughly two years——

Q. Which office was that?

A. Chicago; split into two periods, that was; and at var-

[fol. 2195] ious levels of sales management, including Assistant Sales Manager, and Sales Manager up until the time of the merger. This is approximately the pattern up until that time.

Q. Approximately when were you at the district sales office in Chicago?

A. Actually I was there as a technical representative from about 1937 to 1941 or 1942, and then I was back in 1943 or 1944, as I recall.

Q. Did you specialize in any products at that time, any particular chemical products?

A. The product line of Mathieson at that time was rather restricted, and most of my effort was spent in connection with chlorine, caustic soda, and soda ash—I would say those three, plus some specialty products we were attempting to develop for the paper market primarily.

Q. Would you state for us when Olin and Mathieson merged?

A. As I recall, it was in 1954.

Q. And your position at that time with Mathieson was what?

A. My recollection would be that I was either Assistant Sales Manager or Manager of heavy chemical sales.

Q. After the merger what position did you hold? What was the first position you held in Olin-Mathieson?

[fol. 2196] A. There was no change in that position as a result of the merger. This had no relation to my immediate activity. I do not recollect that there was any change in title or position essentially at that time.

Q. Then either shortly before or shortly after the merger you became Manager of heavy chemical sales, but you were on a straight line-up in the company and the merger did not affect your title or responsibilities, is that correct?

A. That is correct. The merger had no relation to our activities specifically.

Q. And at the time of the merger what were the principal responsibilities that you had in the company?

A. Well, this would be the organizing and managing of the chemical sales force and the development of programs for the marketing of the company's chemical products.

Q. Do you recall when you became Assistant Sales Manager of Mathieson?

A. I can't recall a specific date on that, no.

Q. Is that a position that you held for several yearss?

A. Yes, I would say that was for some period of time.

Q. Do you know when Mathieson Chemical Corporation first developed the chlorine dioxide generation process?

A. Yes. I would like to know how you are defining "develop" there.

[fol. 2197] Q. Well, I prefer that you would define it for us and tell us when you personally first became familiar with Mathieson's interest in a chlorine dioxide generation process. Perhaps you can tell us how it all started.

A. This interest and awareness of the company's interest came almost immediately after my employment by Mathieson in 1931. At that time I was working as a research assistant, and one of the programs we were actively working on involved the production of sodium chlorite, and the production of this material required the generation of chlorine dioxide.

So that from that time forward a large portion of my research effort was directly connected with the generation of chlorine dioxide, the production of sodium chlorite, and the utilization of these two chemicals.

Q. What was the raw material that was used back in the early thirties to produce a sodium chlorite?

A. There are a number of raw materials, but the major ones were chlorate, either sodium or calcium chlorate, and sulfuric or hydrochloric acid. Minor raw materials included lime, caustic soda, carbon black.

Q. Now, at this time in the early thirities was there any commercial use for sodium chlorate?

A. For sodium chlorate?

Q. Chlorate.

[fol. 2198] A. Yes, as far as I know there was.

Q. And what was that use?

A. I am not familiar with the market for chlorate at that time, but it has been used for many years in the match industry, for example, pyrotechnics, as a weed killer.

Q. But your use of it or your familiarity with sodium chlorate back in the early thirities was only in its relation to the production of sodium chlorite, is that correct?

A. That is correct.

Q. When was the Mathieson process patented?

A. You would have to define what you mean by the Mathieson process.

Q. I am sorry; the Mathieson process for generating chlorine dioxide from sodium chlorate.

A. Well, there were a number of such processes.

Q. Well, let's take the most recent one, the one that is now in use in the majority of pulp and paper mills in this country which is known as the Mathieson process. When was the current process patented?

A. My recollection is that the basic work on this process was done in the late thirties, and I would assume that the patents were applied for at that time and issued shortly thereafter. I do not recall the dates on the patents, and there have been subsequent patents on improvements in the [fol. 2199] process.

Q. Is the process which is known in the sodium chlorate and pulp and paper industry as the Mathieson process still a valid patented process or has it expired?

A. I am not sure of that.

Q. Who would know?

A. I suppose our patent counsel.

Q. Leaving lawyers aside, what officer or employee of the company would have charge of the patent position of Olin-Mathieson on processes like this?

Mr. Connelly: That is information that we can readily obtain for you, Mr. Freed. I wouldn't bother to take time on that.

Mr. Freed: Will you furnish to us the date on which the current Mathieson process was patented?

Mr. Connelly: Well, I assume there will be several patents involved, but we will undertake to ascertain which patents and what their status is.

Mr. Freed: All right, fine. Thank you.

By Mr. Freed:

Q. Did you yourself do any work on the formulation of the Mathieson chlorine dioxide process?

A. I don't recollect that I did any work on the specific process currently employed. However, this is in many re- [fol. 2200] spects a technical modification of all of the earlier work that was done.

Q. Do you have any idea when the basic patent or the basic development of this process took place?

A. Yes. The basic Mathieson work and the resulting patents covered the period of the very early thirties.

Q. What was the first use made of the Mathieson chlorine dioxide process?

A. Are you still referring to the present process?

Q. No, sir. From now on, unless specified otherwise, I would prefer that you refer to the Mathieson process as the basic process and any modification in it to date.

A. The basic processes for using chlorine dioxide and/or sodium chlorite were introduced to the paper industry as early as 1937.

Q. How was that introduction accomplished?

A. By the use of sodium chlorite as a practical means of carrying, so to speak, chlorine dioxide, the sodium chlorite being introduced into the pulp to be bleached under a variety of conditions, depending upon the particular mill and the circumstances applicable at that mill as to their process. Chlorine dioxide would then be generated in situ by various techniques, including treatment with acid and chlorine.

Q. Do you recall the first pulp mill at which the process [fol. 2201] was used?

A. The first mill where this process was attempted on a commercial scale was the Tomahawk Kraft Paper Company at Tomahawk, Wisconsin.

Q. Was that mill affiliated in any way with the Mathieson Chemical Company?

A. No.

Q. Back at this time did Mathieson have any paper manufacturing activities?

A. No, sir.

Q. Then the introduction of this process at the Tomahawk Mill occurred approximately in 1937?

A. Yes.

Q. Was it used at any other mills within the next few years?

A. Yes, there were a number of trials and what would be called semi-commercial uses under a variety of conditions in an attempt to fully explore the commercial possibilities.

Q. What were Mathieson's conclusions with regard to the commercial possibilities of that early process?

A. The conclusions were that it was definitely an effective bleaching process, but it was not at that time something that was required by many mills, and therefore it was not a complete commercial success.

[fol. 2202] Q. What was the purpose for which the process was developed?

A. It was to take advantage of the characteristics of chlorine dioxide as a bleaching agent without damaging the strength of the cellulose.

Q. And in terms of the significance of this product to the consumer who would ultimately buy paper, what was the purpose of the process?

A. The purpose was primarily to produce a brighter or white paper with the same strength as the darker paper.

Q. Can you give us the approximate year in which this process first became required—first came into need by the industry?

Mr. Connelly: I am afraid I will have to object to that question on the ground that I do not understand what you mean by being required.

By Mr. Freed:

Q. I understood your last testimony to be that the early Mathieson process was an effective bleaching process but that it was not required. Was that correct, sir? Not required by the paper companies? Would you explain perhaps in a little more detail what you meant by "required"?

A. I believe I said it was not required by the industry. This situation varied from mill to mill, and because of the [fol. 2203] different existing bleaching capabilities from mill to mill one mill might find it suitable, but another would not need it to accomplish the results then required throughout the industry generally.

Q. When did the industry generally first find a need for this bleaching process or for a bleaching process that would accomplish the results that the Mathieson process could achieve?

A. There was significant need in the late thirties, say up to 1940, as evidenced by the fact that some sodium chlorite was sold for this purpose. However, the start of the war and the then imposed limitations on the pulp industry did

away with the normal competitive conditions therein, and it was not until some years after the war when the general need developed again.

Q. The need developed again approximately when after World War II?

A. I would say again this varied from mill to mill, but in the very late forties, around 1950, and in the early fifties.

Q. When the need developed again in the late forties and early fifties what were the terms on which Mathieson made its process available to people in the paper industry?

A. As I recall, the process itself was made available with-
[fol. 2204] out any stipulations. There were certain patents and developments connected with the utilization of the process in terms of bleaching that were made available to the industry on a very modest royalty basis.

Q. Can you describe for us how that worked? In other words, if a paper company became interested in the Mathieson process and they approached the company seeking to use that process what would the negotiations be? What arrangements would be made in a typical instance?

A. There would be a royalty agreement made covering the patents and processes for the use of chlorine dioxide on bleaching as distinguished from the process of generating chlorine dioxide, and this was made available, as I say, on a modest royalty basis.

Q. Were there any purposes apart from bleaching for which the process could be used commercially?

A. Yes, there were.

Q. What were those purposes?

A. One of the early uses was to treat flour. It was also used to treat low-grade tallows and lards. Modifications of the process were used to bleach textiles.

Q. And for any of these uses there was no charge whatsoever for the Mathieson process; is that correct?

A. I would like a distinction here on the word "proc-
[fol. 2205] ess" again, because it is a question of whether we are talking about the process for the generation of chlorine dioxide or the utilization of it.

Q. Let us take it in two parts. For the generation of the chlorine dioxide first.

A. It is my recollection that there were never any charges on this particular phase of the development.

Q. And the second part, a charge for the use of the process—for the use of the chlorine dioxide that was generated?

A. There were certain charges based on the number and scope of the patents that we had covering these various applications.

Q. Could you explain what the economic basis was upon which Mathieson recovered its investment in development of the Mathieson process? In other words, how did you get your money back?

Mr. Connelly: Mr. Freed, I am refraining from objecting, but I do call your attention to the fact that time is moving on and we are still back in the thirties and discussing a subject which does not seem to me to have any conceivable relevance to the present litigation. Do you plan to pursue this topic at length or are you almost at the end of it?

Mr. Freed: Mr. Connelly, I guess that depends on what the witness' answers are. At the present time I am simply [fol. 2206] trying to find out the background of the chlorine dioxide process.

Mr. Connelly: Would you care to put on the record a statement of the materiality that you attach to the testimony you desire to elicit by the last question?

Would you read the question, Mr. Reporter?

(The last question was read by the Reporter as follows:)

> "Question: Could you explain what the economic basis was upon which Mathieson recovered its investment in development of the Mathieson process? In other words, how did you get your money back?"

By Mr. Freed:

Q. It is the Government's understanding that the Mathieson process is used by Olin for the purpose of aiding the sales of sodium chlorate. Is this understanding correct, Mr. Logan?

A. I don't think it is entirely correct, no.

Q. Would you state the respects in which it is incorrect?

A. The Mathieson process of bleaching was originally designed to sell sodium chlorite as a new commercial chemical.

Q. We are talking about the use of the Mathieson process today. Does the Mathieson process today assist Olin or [fol. 2207] any other company in selling sodium chlorate? Does the existence of this process affect your sales?

A. I don't think I can answer that because I don't know to what extent the buyers of chlorate place value on the process that has been installed in some cases for a number of years.

Q. Is it a practice of your company to use the Mathieson process in soliciting orders, in urging sales of any product on any company that uses or might use sodium chlorate?

A. It is not the practice in the sense that it is a part of any program any more than any other service we might develop or provide for our customers generally.

Q. Would it be a fair statement then to say that your company's connection with the Mathieson process is of no particular value in your company's sales efforts on sodium chlorate?

A. I would express the opinion that it doesn't hurt us, but I don't know to what extent it helps us.

Q. In your opinion, sir, can any seller of sodium chlorate find equal access to any pulp and paper company which may be a consumer of sodium chlorate irrespective of whether that company, that seller, has any connection with or knowledge of the Mathieson process?

[fol. 2208] A. As far as I know he can, yes, sir.

Q. Is your company presently engaged in selling sodium chlorate?

A. Yes, sir.

Q. Would you describe for us what is involved in soliciting business, soliciting sodium chlorate business? How does a salesman who visits a company for the first time attempt to sell Olin-Mathieson's sodium chlorate?

A. I don't think I ought to speculate on how an individual salesman does this.

Q. Do you have a sales training program in your company?

A. Yes.

Q. Do Olin-Mathieson personnel who are engaged in the sale of sodium chlorate receive training from your company as to how to sell chemical products generally?

A. Some of them wouldn't; some of the more recent employees would.

Q. Is there any particular training that a sodium chlorate salesman will receive?

Mr. Connelly: You mean as distinguished from a salesman of some other product?

Mr. Freed: Yes, sir.

A. No, sir.

[fol. 2209] By Mr. Freed:

Q. Then it is your position that any chemical salesman is capable of selling sodium chlorate to the pulp and paper industry?

Mr. Connelly: I take it you mean in putting that question any salesman of equal ability?

Mr. Freed: I accept that qualification.

A. Yes, I would say any salesman of equal ability ought to be received in a normal manner by any consumer of his product or any others.

By Mr. Freed:

Q. Directing your attention specifically to the sale of sodium chlorate for pulp and paper customers, would you qualify your last answer in any respect? Is there anything unusual, any unusual obstacles, any unusual difficulty, that a salesman may face in attempting to break into selling sodium chlorate to a company that has not previously bought from his company?

A. Not generally. This, however, is a comparatively new chemical as distinguished from some of long usage, and therefore salesmen handling new items have to be more aware of some facets of the picture.

Q. Would you tell us what those facets are?

A. Well, he would need to have a pretty thorough pic-
[fol. 2210] ture of the producing and transportation aspects in terms of geography. He would need to know something about the transportation equipment. He would need a limited working knowledge of the handling and use of the

chemical as opposed to something that was well established and for which the consumer had no such need.

Q. Approximately how long would it take to train a salesman, a salesman of competent ability, to be able to overcome these facets, these problems in selling sodium chlorate?

A. No special time could be given there because this would be just a part of his normal training in familiarizing himself with the products generally.

Q. This is the kind of training that he could secure by working at the job, is that correct, sir?

A. Yes; and if he is a new man in the chemical business we usually give him some experience around our plants and in our laboratories, but this varies considerably.

Q. Can you give us an average time for the training of a chemical salesman in your company?

A. An average would be very difficult. For young men relatively fresh out of school it might be a matter of six weeks of specialized work and maybe anywhere from three months to a half year of a certain type job before they were put out in the field.

[fol. 2211] Q. By a certain type of job do you mean an office job?

A. A standard office job related to the sales function, yes.

Q. Once you have a chemical salesman in the field and you wish to add sodium chlorate to his line, will any additional training or office work be necessary?

A. No.

Q. How did Olin become interested in selling sodium chlorate?

A. When we recognized that the chlorine dioxide usage was going to grow and be economically outside the scope of sodium chlorite, we had to reckon with the fact that sodium chlorate would then become the raw material for the process.

Q. When did that happen?

A. I would say this recognition began in the early fifties and continued to develop until it was apparent that sodium chlorite was not suitable for this particular usage on a large commercial basis.

Q. Would you describe for us the difference between

sodium chlorite and sodium chlorate for use in connection with your process?

A. On the basis of chemical formula sodium chlorate has 50 per cent more oxygen than sodium chlorite and there are differences in the stability of the two materials, all of [fol. 2212] which reflects on the ease with which chlorine dioxide can be generated.

Q. In the early days of the Mathieson process utilization by the industry was sodium chlorite the standard raw material?

A. For chlorine dioxide generation, yes, that is correct.

Q. Was Olin in the business of selling sodium chlorite at that time?

A. Mathieson was in this business.

Q. And can you give us the years during which Mathieson sold sodium chlorite to the pulp and paper industry for use in connection with the chlorine dioxide generation process?

A. It would be my recollection that such sales started around 1935, continued as the process was developed, up until the time of the war, was probably practically discontinued due to the war and the limitations on paper brightness, and was resumed somewhat thereafter and in fact continues on an occasional basis yet today.

Q. Approximately how much sodium chlorite do you sell today for the generation of chlorine dioxide?

A. For the paper industry?

Q. Yes, sir.

A. I don't think I can answer that. I don't know. It [fol. 2213] would be a relatively small amount.

Q. Are there any companies in the paper industry who use sodium chlorite exclusively?

A. For bleaching?

Q. For chlorine dioxide generation bleaching.

A. I am not sure but there might be.

Q. Who else sells sodium chlorite for this same purpose?

A. There is no other U. S. producer of sodium chlorite. There has been some imported material brought in by some distributing houses. I do not know for what use they have sold it.

Q. Olin's sodium chlorite is manufactured only at Niagara Falls, is that correct?

A. Yes, sir.

Q. What is the sales area in which the sodium chlorite is sold?

A. For all uses the sales area would be the entire United States.

Q. Does sodium chlorite have uses apart from pulp and paper bleaching which parallel uses of sodium chlorate?

A. No. Essentially none of the other chlorite uses can be handled by chlorate,

Q. Then confining your answer to the sale of sodium chlorite for pulp and paper bleaching, where does Olin make [fol. 2214] such sales today?

A. As I stated earlier, such sales are quite limited and they might be made at anywhere in the United States a particular mill condition justified the use of chlorite. There is no geographic limitation on the sale.

Q. Once a paper company puts up a chlorine dioxide generation plant using the Mathieson process are sodium chlorite and sodium chlorate interchangeable?

A. In the sense that they might accomplish somewhat the same end result they are interchangeable. He would not use his generator and certain aspects of his operation would be entirely different.

Q. Then would it be correct to conclude that once a company puts in a generator to use sodium chlorate they cannot buy sodium chlorite and vice versa unless there is a change in equipment?

A. No, this is not correct.

Q. Would you correct me then, sir?

A. His chlorine dioxide generator that would utilize chlorate serves no purpose if he uses chlorite, but he could buy chlorite and use it in his mill in place of running his generator, but this becomes a matter of economics and would usually be done only under emergency conditions.

Q. To your knowledge does any paper mill use sodium [fol. 2215] chlorite today other than under emergency conditions?

A. If you assume that his inability to sell his product without further treatment is an emergency, I would say that these are all emergencies.

Q. Could you name for us the sodium chlorite customers of Olin who use sodium chlorite to bleach pulp and paper?

A. I can't name those today, no.

Q. Could you furnish us with a list giving the names of the customers, the location of the plants to which the sodium chlorite is delivered, and the total quantity that is involved? Do you have any idea, sir, of the total quantity that is involved here?

A. I do not. I know it is relatively small, because this would be an emergency proposition generally.

Q. As I understand it, the sodium chlorate industry today sells about 90,000 tons of sodium chlorate per year. Can you give us a comparative figure for sodium chlorite sales?

A. It is a very small per cent.

Q. Would it be in perhaps the 5,000-ton range?

A. Less than that.

(There was a discussion off the record.)

Q. Can you tell us what the peak volume of sodium chlorite sales was in Mathieson's experience, the peak in any one year, and tell us the year, the approximate time when [fol. 2216] that was a good selling product?

A. I suspect—I am trusting to my recollection here. I think that probably 1960 was the best year. This is sodium chlorite for all purposes.

Q. And now limiting your answer to sale for the generation of chlorine dioxide to pulp and paper companies?

A. I don't think I can accurately answer that. It would be some years back.

Q. Could you furnish us the annual total sales of sodium chlorite exclusively to pulp and paper companies for the generation of chlorine dioxide back to 1956?

Mr. Connelly: We will look into that, Mr. Freed, and let you know what we can make available to you.

By Mr. Freed:

Q. What position does Mr. Northgraves hold in your company?

A. He is essentially a technical service representative.

Q. Can you describe briefly for us Mr. Northgrave's responsibilities insofar as they are connected with the Mathieson chlorine dioxide generation process?

A. His responsibilities would be to analyze a particular customer's problems and to make recommendations on the size and type of chlorine dioxide equipment both for gen-
[fol. 2217] eration and for bleaching purposes.

Q. Does Mr. Northgraves in particular or does Olin-Mathieson in general actively solicit the installation of the Mathieson chlorine dioxide process generators?

A. I would say that we have not definitely solicited the installation of generators. We have not shied away from providing information about generators.

Q. Do you only furnish information in this area on request?

A. Only by mutual agreement or understanding with the party who makes the request or customer.

Q. Directing your attention to the first contact between Olin and a potential customer or installation of the chlorine dioxide process, are these contacts usually made by Olin contacting a potential user or by a potential user contacting Olin?

A. Limiting it to the first installation or the first prospect, I have no recollection at the moment who that was and I can't answer the question.

Q. How about the most recent instance you can recall?

A. I don't know how that one would occur and again I don't know the name of the company that has been the most recent one.

Q. Who in your company would be in the best position
[fol. 2218] to tell us how Olin establishes contact with a potential user of the chlorine dioxide process in each case?

A. Well, this contact has been established in most cases for years. It is not a case of establishing a contact with respect to this particular thing.

Q. In other words, is the customer industry closed now? There are basically no new paper companies that are likely to go into this business, this business of using the Mathieson process generators?

A. No, that is not entirely correct.

Q. Well, my question, then, is who in the company can give us testimony as to the efforts made by Olin in respect to installing chlorine dioxide generation plants using the Mathieson process in pulp and paper companies?

Mr. Connelly: I am somewhat confused by the question, Mr. Freed. Do you mean what is the name of each salesman that has ever been engaged in that kind of contact or is there anyone better qualified than Mr. Logan to deal with the subject? I just don't know what you mean.

By Mr. Freed:

Q. Is there anyone better qualified than you, Mr. Logan, to deal with questions as to Olin's efforts in promoting the installation of Mathieson process generators?

A. There probably should be somebody, but this would [fol. 2219] encompass a number of people who had been doing this along with their regular work, and I don't know of anyone who would be particularly qualified to answer the question with respect to any specific time or account.

Q. Does anyone have over-all responsibility for any program in Olin which involves the promotion of the Mathieson process generator for pulp and paper company use?

A. There is no program for the promotion of a Mathieson generator, any more than there is an attempt to sell each and every one of our other chemical products. This is a part of the regular sales organization activity.

Q. Can you tell us the approximate number of Mathieson process generators which have been installed in pulp and paper companies in the past five years?

A. I can't do it on the basis of the last five years.

Q. Is there a more appropriate period for which you could give us an answer?

A. I would judge that in total there are thirty or more Mathieson generators installed.

Mr. Connelly: Mr. Freed, that information has already been furnished to you in connection with the answers of Olin to plaintiff's interrogatories, verified February 22, 1961.

By Mr. Freed:

Q. Is Olin in competition with any other company in [fol. 2220] promoting or urging the use of its chlorine dioxide generator over that of any other company?

A. It is not in competition in the sense that it makes any money off of selling or having a customer install a Mathie-

son generator versus somebody else's generator. It has recognized that one other generator, namely, the Solvay system, has been generally available, and it has therefore accepted this as a competitive process in a rather general way.

Q. Is it a matter of indifference to your company whether a pulp and paper manufacturer installs the Solvay process or the Mathieson process?

A. It is not complete indifference. We hate to see a customer make a mistake.

Q. Is there any benefit to your company that accrues from a pulp and paper company installing the Mathieson process as opposed to a different process?

A. We assume or hope that there is general good will created by this, but we have little evidence to justify a statement that this is true.

Q. In other words, there is no particular benefit to Olin in any of its other activities from the installation of a Mathieson process generator in a pulp and paper mill?

A. I can't determine how much benefit there is. I would hope that there is some and assume there is some.

[fol. 2221] Q. Well, if there is some benefit what would that benefit be?

A. General good will in the customer's relation toward us.

Q. How is that good will translated into money for Olin?

A. Well, there has been a serious question in our minds on many instances as to whether it ever was translated into anything tangible. To the extent that a generally friendly relationship with a customer would reflect in more business to us, we would assume that this might be a result of our efforts with the generator.

Q. Are you familiar with the promotional efforts of your company in the sale of sodium chlorate?

A. In a general way, yes.

Q. Who is responsible or familiar in a more detailed way than you?

A. Well, this would come under our Sales Manager and some of his subordinates.

Q. And the Sales Manager is Mr. Johns?

A. At the present time, yes.

Q. To your knowledge is Olin's connection with the Math-

ieson process generator used in any promotional efforts by your company in the sale of sodium chlorate?

[fol. 2222] A. I don't know of any specific cases where it has been.

. . . . . .

[fol. 2223] Q. Do you consider that Olin has any advantage over any other company in selling sodium chlorate?

A. You mean over any other producer of sodium chlorate or any other seller of sodium chlorate?

Q. Both.

A. Yes, I would assume we have some advantages over certain producers and sellers.

Q. What are those advantages?

A. Primarily a long-standing, concentrated relationship with many of the firms who are prospects for sodium chlorate.

Q. What do you mean by "concentrated relationship"?

A. I mean a relationship that has has multiple facets in terms of time, products, and geography.

Q. How does time figure into this, Mr. Logan?

A. Only in the sense that Mathieson as a company aggressively doing business over the area where many of these prospects are located has been maintaining contact [fol. 2224] with them since we established ourselves as a southern company back in the 1890's.

Q. What is the relationship in terms of products?

A. Through the period of time I have described we have sold quite generally a number of products to the industry, and hence this has called for a repetition of contact and a continuity of effort with the account.

Q. Is that all that you mean by "products"—sales by Olin to these companies?

A. Yes, that is what I had in mind.

Q. Do I understand correctly that the advantages which Olin has over other producers and sellers of sodium chlorate is confined to Mathieson's long history of selling in this area and to a history of selling many products in this area and that those are the two advantages that Olin has over other people who might sell sodium chlorate in this area?

A. I didn't say it was confined to that. I said those are some of the advantages.

Q. Would you continue with your list of advantages.

A. Well, I think we have a generally high level of capability in our sales organization in terms of the number of men and quality of men covering this industry.

Q. Are there any others?

A. We have a geographical multiplicity of producing [fol. 2225] points on other products that has facilitated our serving this industry.

Q. Are there any other advantages, sir?

A. As I mentioned earlier, I think our general effort in the area of pulp bleaching over a period of some time represents an advantage that is pretty hard to put any tangible benefit on.

Q. You have doubts about its value?

A. No, I didn't say that.

Q. Do you have great confidence in the value of this factor?

Mr. Connelly: I object to the form of the question as argumentative.

By Mr. Freed:

Q. Are your pulp bleaching activities of great value in the sale of sodium chlorate?

Mr. Connelly: I object to that question as repetitious. You have gone into the facts now on several occasions and have gotten rather full answers.

Mr. Freed: There may be a difference of opinion on that, Mr. Connelly.

Mr. Connelly: The record will, of course, stand on its own in that respect.

[fol. 2226] By Mr. Freed:

Q. Are there any other advantages, Mr. Logan, that Olin may have in the sale of sodium chlorate to the pulp and paper industry?

A. I don't know of any others of any great consequence for Olin itself.

Q. In your capacity as a sales agent for Penn-Olin are there any other advantages?

A. Yes, the same ones that I have mentioned would apply, but I think the prospect of opening up a new facility that affects the delivery cost to certain locations, and so forth, represents an advantage that we would have, acting for Penn-Olin.

Q. Would that be an advantage to a potential consumer?

A. In some cases, yes, sir.

Q. Is the location at which Penn-Olin will manufacture closer to most of the pulp and paper mills than competitive locations?

A. Not most, but some.

Q. Not most what?

A. Not most locations, but some.

Q. Does your company furnish continuing technical services to pulp and paper companies in connection with the generation of chlorine dioxide?

[fol. 2227] A. It has provided services of one degree or another on bleaching, including this area ever since the 1930's, yes, sir.

Q. Does your company render very extensive technical services to these companies today?

A. I would not call it extensive, although this is a relative matter.

Q. Are they very important services?

A. I would say they are important. They are substantially less than were rendered at one stage of the history.

Q. Are they services that Olin is uniquely qualified to render and no one else can render?

A. Not generally, except with respect to chlorine dioxide bleaching we probably have a greater accumulation of experience than anyone else.

Q. Is the service that you give in connection with chlorine dioxide bleaching in any way related to your ability to sell sodium chlorate?

A. I would assume it is helpful, but I can't place a direct value on it.

Q. Have you recruited any new people in this technical phase of your company's operations within the past several years?

A. Yes, we from time to time add personnel for this

[fol. 2228] effort, because either people retire or move to other jobs.

Q. Approximately how many people in the Olin organization are engaged in rendering technical service on the chlorine dioxide generator or process?

A. At the present time?

Q. Yes, sir, at the present time.

A. There might be four people who would spend a portion of their time, and I would say in most of the cases of the four this would be a minor proportion of their time.

Q. Can you tell us who those four people are?

A. Mr. Woodside, who would spend quite a small portion of his time; Mr. Northgraves, who has spent a fair portion, but at the present I believe is not spending a very high proportion; Mr. Hagan, who is devoting some time to this; and at various times Mr. Hopkins has worked on this. At the moment I don't believe he is active in this area.

Q. Is Mr. Hagan very active in this area now?

A. In terms of man hours he probably is the most active of the four.

Q. Are your activities in this area in terms of time spent increasing or likely to increase?

A. I imagine they will tend to decrease or remain constant, although in the area of bleaching generally we are undertaking certain other work that tends to increase our [fol. 2229] total bleaching effort.

Q. Is that bleaching in connection with the use of sodium chlorate and chlorine dioxide generators?

A. Not directly. It is a general problem of purifying cellulose.

Q. Is this problem of purifying cellulose for the same purpose that sodium chlorate is used or for a different purpose?

A. It is for the general purpose of purifying it. That is about all I can say on that.

Q. My question is directed to purposes for which sodium chlorate is used in chlorine dioxide generation. Are the other bleaching purposes that you have mentioned parallel to these? Are they competitive with these? Or are they simply bleaching activities in another direction, in another field, but not competitive with sodium chlorate uses?

A. They could be all three, Mr. Freed.

Q. Would you state for us then those services or those respects in which your technical services for bleaching purposes are increasing?

A. One specific area is in expanding our laboratory facilities for the purpose of studying bleaching generally.

Q. Would you tell us what all of the elements of the increase are, or is that the most substantial one?

[fol. 2230] A. That is the most substantial one. In other words, we are improving our laboratory ability to study the problems of bleaching generally, not necessarily as related to chlorine dioxide.

Q. Do you have any plans at present to increase the staff that furnishes the technical services now provided by Messrs. Woodside, Northgraves and Hagan insofar as they spend their time in chlorine dioxide generation work?

A. I have no such plans, and I don't know of any.

Q. Can you give us any idea of the amount of money that Olin has put into its chlorine dioxide generation process development?

A. This is a very complex accounting problem. If I had to guess all the costs going back into the thirties, it would be several million dollars.

Q. Approximately how much of the several million dollars has been spent within the past two or three years, say three years, 1958 to 1961?

A. A minor proportion of it.

Q. Are you familiar with the way in which these development expenses have been treated by the accounting officials of your company?

Mr. Connelly: Since 1930, Mr. Freed?

[fol. 2231] By Mr. Freed:

Q. As far back as you have been involved with these companies.

A. I am not familiar with the specific manner. In general, they have been handled as parts of research, as parts of product development, partly on technical service charges, and partly as sales effort charges. The large proportion of the total would probably be in the research and development area over the years.

Q. Approximately how much of the several million dol-

lars that has gone into this program has been returned in royalties or other charges for the use of the technical services and know-how of Olin?

A. Has been returned in what way?

Q. In any way of value to the company?

A. I can't answer that because I don't know what has been returned directly as a result of it.

Q. In terms of the monetary return in royalty charges has the amount of money been substantial?

A. Comparatively small compared to the several million dollars.

Q. Could you give us a figure?

A. You want this limited domestically? Is that what you——

[fol. 2232] Mr. Connelly: Yes, domestically.

By Mr. Freed:

Q. I would prefer that you do not limit your answer. I would prefer that you give us a response in terms of the money returned compared to the amount expended, the several million dollars expended, and the sources from which the income was secured is for present purposes irrelevant to the question.

A. I have never seen an accounting summation of this but I would judge it is less than 10 per cent of the money spent.

Q. In the portion of the development expense which has been charged to product development what product has been developed, or what product is accountable for the allocation to that category?

A. My reference was primarily to sodium chlorite.

Q. In recent years has that changed to sodium chlorate?

A. No. We do not break such charges down on a product basis.

Q. In the category of sales effort charges, what sales would receive an allocation of this development expense?

A. I didn't mean to imply there was an allocation. I meant to imply that if there had been an allocation because we do not actually break our sales charges down by prod-

[fol. 2233] ucts; this is all an integral part of the whole sales effort.

Q. As I understand the last testimony, Mr. Logan, of the several million dollars which you estimate to be the development expense on the chlorine dioxide process approximately 10 per cent has been returned in your opinion——

A. I believe I said not over 10 per cent.

Q. Correction. Not over 10 per cent has been returned in actual monetary payments to the company, and that those payments have been in the form of royalties on the use to which the process was put; is that correct?

A. Royalties on the use to which the process was put?

Q. Yes.

A. Not entirely.

Q. Would you make my statement accurate?

A. There has been a small amount collected on products sold for use in the process.

Q. Would this be over and above the less than 10 per cent we were just talking about or would this be included in that less than 10 per cent?

A. This would be a very minor proportion of the 10 per cent, included in the less than 10 per cent.

Q. What are the products on which the small amounts were collected?

A. Well, our arrangement with Pennsalt actually calls for a small payment per ton of chlorate that they sold [fol. 2234] for use in pulp bleaching.

Q. That payment over a period of seven or eight years has amounted to about a thousand dollars; is that correct?

A. This general order of magnitude, yes.

Q. Is this the only return in the second category of amounts collected on products sold?

A. To the best of my recollection, that is true.

Q. Did Olin collect any money from any other seller of sodium chlorate to a pulp and paper mill using the Mathieson process?

A. Yes, but without direct relation to the use of the Mathieson process.

Q. Would you explain that answer, sir?

A. We made arrangements to grant immunity under our patents for bleaching with chlorine dioxide and collected some money in this connection.

Q. You are now speaking about companies other than Pennsalt?

A. That is correct.

Q. With what companies did you make such arrangements?

Q. The only one I can think of was with the Canadian affiliate of Pittsburgh Plate Glass and with the Electric Reduction Company in Canada.

Q. The Canadian affiliate you refer to is Columbia [fol. 2235] Southern Chemical Company?

A. It is operated under Columbia Southern. I think they call it Standard Chemicals, I believe is the Canadian name.

Q. I don't believe I understand, Mr. Logan, the difference between the arrangement with Pennsalt and the arrangement with the two Canadian companies you just mentioned. Would you explain the difference in arrangement between these two companies with regard to the chlorine dioxide process?

A. They were basically two arrangements, the details of which I won't attempt to recollect. The one with Pennsalt, and actually I believe the one with Electric Reduction, fall in the same category. There was a grant of immunity under certain bleaching patents for which the parties paid a designated amount per ton of chlorate sold for use in bleaching. The other arrangement was an outright, flat-sum sale of the rights under our bleaching patents.

Q. Do you recall what the return to Olin or Mathieson was for the sale of rights to Standard Chemicals?

A. I believe it was $50,000.

Q. And that arrangement permitted, and correct me if I am wrong, Standard Chemicals to sell sodium chlorate in Canada for use in connection with the Mathieson chlorine dioxide process?

[fol. 2236] A. Yes, sir, that is a correct statement.

Q. Then I misunderstood you.

A. The rights were for the granting of immunity under patents concerning the use of chlorine dioxide in bleaching, not the generation of chlorine dioxide, which is the so-called Mathieson process.

Q. When you say "use in bleaching" are you referring to the bleaching of pulp and paper?

A. Yes, sir.

Q. And it is the same process that we have discussed previously that uses sodium chlorate to generate the chlorine dioxide?

A. No, sir.

Q. Would you put the record straight again, please?

A. The collections we made were in relation to patents concerned with the use of chlorine dioxide exclusively in connection with pulp bleaching. This had nothing directly to do with the Mathieson process for the generation of chlorine dioxide.

Q. My question, however, is whether this sale of rights was of value in connection with a bleaching process which could only be used after sodium chlorate had been introduced into a generator?

A. No, sir. These bleaching patents could involve the [fol. 2237] use of chlorine dioxide from whatever source it might come.

Q. In fact, have these patents been used for chlorine dioxide bleaching that involves a raw material other than sodium chlorate?

A. This is a part of the technology that has been employed throughout the paper industry over the past couple of decades, yes.

Q. Then your answer is to the best of your knowledge sodium chlorate is the only raw material used to generate the chlorine dioxide?

Mr. Connelly: I object to your statement as to what the witness answer is. The witness' answer will speak for itself.

Mr. Freed: Would you read the witness' last answer, please?

(The answer referred to was read by the Reporter.)

By Mr. Freed:

Q. When you said "Yes", Mr. Logan, you were referring to the use of sodium chlorate; is that correct?

A. No, sir. I was referring to the process on which royalties—correction: "royalties" is probably not the word—the process connected with the moneys that we collected.

Q. My question was whether to your knowledge this

process has been used in connection with chlorine dioxide [fol. 2238] generated from any raw material other than sodium chlorate?

A. "This process" needs definition. I want to be sure I understand what you mean by "this process".

Q. The bleaching process, the bleaching of paper.

A. O.K. Now could I have the question again?

(The following question was read by the Reporter:)

"Question: My question was whether to your knowledge this process has been used in connection with chlorine dioxide generated from any raw material other than sodium chlorate?"

A. I am not positive that it has.

Q. To the best of your knowledge has a raw material other than sodium chlorate been used?

A. I suspect that sodium chlorite has been used at times as a source of chlorine dioxide under the techniques covered by the patents involved in this.

Q. Turning now to the use of the chlorine dioxide process apart from any of the arrangements that we have just been discussing, is the Mathieson process currently being used for the bleaching purposes covered by those agreements or arrangements that Olin has with Pennsalt, Electric Reduction, and Standard Chemicals?

A. I believe it is, although I believe some of the patents covered in these arrangements have probably expired, but [fol. 2239] the technology practiced is quite likely to be an integral part of the bleaching procedures fairly generally employed throughout the industry.

Q. When was the arrangement with Pennsalt entered into?

A. I believe it was 1953—two or three—three, I think.

Q. At that time was any other company which produced sodium chlorate selling that sodium chlorate for use in a Mathieson process generator? And when I say any other company I mean company other than Pennsalt.

A. I would not know to whom they were selling their products.

Q. Did Mathieson have any chlorine dioxide generators installed in the eastern part of the United States back in 1953?

A. I am not positive of the timetable of generators' installation, but I would suspect that there were probably were a very limited number at that time.

Q. To your knowledge was Pennsalt selling sodium chlorate in the east back in 1953?

A. I have no knowledge of that.

Q. Do you have any knowledge whether any company other than Pennsalt sold sodium chlorate to a Mathieson mill, a Mathieson generator-using mill in the early 1950's.

A. If there were generator installation obviously somebody was selling them chlorate, but I would not know the source of that chlorate.

[fol. 2240] Q. To your knowledge have there been any patent infringement suits brought by Mathieson or Olin-Mathieson in connection with the patents that are related to your Mathieson process?

A. I don't believe there have been.

Q. If your recollection is incorrect, would you advise us? Would counsel furnish us that information?

Mr. Connelly: We will look into that, Mr. Freed.

By Mr. Freed:

Q. I don't believe I asked you when the arrangements with Standard Chemicals and Electric Reduction were entered into. Do you have any recollection on either of those?

A. The Standard Chemical one was comparatively recently, I would say three years ago, three to four years ago. The Electric Reduction one I would judge was in the middle fifties, but I don't recall the exact date.

Q. You are familiar with the fact that American Potash and Hooker Chemical Company are today selling substantial quantities of sodium chlorate to paper mills using the Mathieson process, are you not?

A. I have no knowledge of how much they are selling to the paper industry.

[fol. 2241] Q. Are you familiar with the fact that those companies are selling sodium chlorate to mills using your process?

A. I am aware from sales reports that they apparently are selling, yes.

Q. Can you distinguish for us, in terms of the patent and license and immunity agreements we have been discussing, between the grant of authority to Pennsalt and to Electric Reduction and to Standard Chemicals, on the one hand, and the lack of any authority or license granted to other companies which are engaged in the sale of sodium chlorate for use in Mathieson process generators?

A. The reason for the difference I believe is due to the fact that the parties who made arrangements came and wanted to make an arrangement that clarified the legal situation with respect to the immunities.

Q. In other words, other producers of sodium chlorate may be selling it for use in connection with the same process for which Pennsalt and the two Canadian companies are paying or, in the past, paid for the use of the process?

A. This I believe is correct, although there is a matter of time difference here.

. . . . . .

[fol. 2242] Q. On February 22, 1960, Olin submitted answers to plaintiff's interrogatories, and in response to Item 8 of those interrogatories the following statement was made:

> "If an inquiry as to the process is received, the person or organization inquiring is referred to equipment manufacturers who are able to construct the necessary apparatus."

[fol. 2243] Would those referrals be made by Mr. Northgraves or someone in his office?

A. This would be generally correct, yes.

Q. In the following sentence of that interrogatory response Olin has stated that engineering personnel may be called upon to assist in determining whether or not the process would be appropriate for the particular plant concerned and to assist with the engineering and installation of the apparatus. Is any charge made for any of the services defined in that sentence?

A. To the best of my recollection we have no arrangement for charging any of these services.

Q. And these again are the services that are performed

by the four gentlemen, Mr. Northgraves and three others that we mentioned before?

A. That is correct.

Q. In the first sentence on page 10 of the interrogatory we have just been referring to it is stated that during the past five years Olin has not entered into any formal license arrangement with any domestic person or organization. To your knowledge have there been any informal license arrangements entered into in this period?

A. No, sir, I have no knowledge.

Q. To your knowledge has Hooker or American Potash [fol. 2244] ever discussed the possibility of a license with Olin?

A. I have no recollection of American Potash having ever discussed it. The predecessor to Hooker, namely, Oldbury, discussed it in a casual way and came to the conclusion that under the timing of the patents and the status of the situation that they did not want such an arrangement.

Q. When did that conversation take place?

A. Oh, I don't think there was any formal conversation. This was rather casual and it would go back several years. It might even go back beyond the five-year period.

Q. Going back beyond the five-year period covered by this interrogatory, is it still your recollection that Olin never received any application from American Potash and certainly turned down none with respect to this process?

A. That is correct.

[fol. 2245] Q. As I understand your testimony, Mr. Logan, less than 10 per cent of the development cost of the Mathieson chlorine dioxide process has been returned in terms of royalties and the other direct ways you have mentioned. Do I correctly understand your testimony to be that the remaining 90 per cent is charged to good will?

A. No, not exactly. This total cost includes now a thirty-year period of research and development in connection with chlorine dioxide and sodium chlorite as a source of chlorine dioxide and has been accounting-wise charged off through the years as the costs were accrued, the objective being initially to develop sodium chlorite as a commercial chemical. Therefore this has not been written off as good will in a sense, and I don't know how much good will has

attached to the multiplicity of effort down through the years.

Q. Approximately how much money would you estimate is being spent annually on the development and promotion or technical service involved in connection with the Mathieson process?

A. At the present time and specifically related to the Mathieson process it would be in my judgment significantly less than $100,000 a year being spent.

Q. And that figure would include any research that is going on and any technical service that is given to users of [fol. 2246] the process; is that correct?

A. As directly related to this generation process, yes.

. . . . . .

[fol. 2247] Q. The marketing of sodium chlorate is not the primary objective of Olin in the services it affords to the pulp and paper companies?

A. That is correct; it is not.

Q. Mr. Logan, are you the Vice-President of Penn-Olin Chemical Company?

A. Yes, sir.

Q. Is there an understanding that the officerships in that company will rotate on an annual or periodic basis?

A. There is no understanding. This was mentioned as a possibility and conceivably a desirability.

Q. At the present time are there any plans to rotate any of the officers?

A. Not as far as I am aware.

Q. Do you receive any compensation from Penn-Olin Chemical Company?

A. No, sir.

Q. Approximately how much time do you spend in performing your duties as Vice-President of that company?

A. At the present time I would not say more than 5 per cent. The average will go up this month.

Q. Apart from any duties that relate exclusively to this [fol. 2248] litigation what are your responsibilities and activities in Penn-Olin?

A. At the present time we are quite restricted and limited to a review of any papers that are in the process of

development concerning the company or in connection with the general sales effort for the future.

Q. Why do you say for the future? Has there been any general sales effort up to date?

A. Only in the sense that we are currently selling chlorate.

Q. Is there any other type of sales effort that you will make in the future?

A. No.

Q. When did you begin to make sales efforts on behalf of Penn-Olin?

A. On behalf of Penn-Olin as of the first of this year.

Q. When did you take any action with regard to promoting the sales of Penn-Olin?

A. No specific action has been taken other than the continuation of general sales effort that prevailed prior to the first of this year and some intensification of that on the part of our salesmen in the field.

Q. What general effort was that?

A. Prior to the first of the year?

[fol. 2249] Q. Yes, sir.

A. We have been selling chlorate for several years.

By Mr. Connelly:

Q. When you say "we" I take it you are referring to Olin-Mathieson?

A. Yes.

By Mr. Freed:

Q. During the year 1960, did Olin promote the sale of sodium chlorate, solicit orders for sodium chlorate?

A. We solicited orders. I don't know what you mean by the word "promote", but we solicited orders and sought business, yes.

Q. Were the orders that you solicited in 1960 for the account of Olin-Mathieson exclusively?

A. That is correct.

Q. They were not performed on behalf of Penn-Olin?

A. That is correct. They were performed on behalf of Olin.

Q. Do I correctly understand your testimony, then, that any sales developed during the year 1960 will be accounted for exclusively on the books of Olin-Mathieson and will not in any way be reflected on the books of Penn-Olin?

A. This is my understanding, yes, sir.

Q. Do I understand that all of the sales which have been [fol. 2250] entered on the books of Penn-Olin in 1961 were the result of sales efforts confined exclusively to the year 1961?

A. I don't think any sales have been entered on the books of Penn-Olin as of yet.

Mr. Freed: Would you mark this Plaintiff's Exhibit No. 2 for Identification?

(The paper referred to was marked by the Reporter "Plaintiff's Exhibit No. 2 for Identification.")

Q. I show you, Mr. Logan, a document which has been marked Plaintiff's Exhibit No. 2 for Identification, which has on it a stamp "Penn-Olin C56", and the title of this statement is "Penn-Olin Chemical Company Sodium Chlorate Sales and Earnings, February, 1961."

I ask you to direct your attention to the sales listed on that statement and I ask you, Mr. Logan, when those sales were solicited?

A. Since they were sales in February the orders were probably received during January or early February, and any solicitation directly related to these orders probably occurred in January.

Q. Are you familiar with the sales efforts that Olin-Mathieson has exerted on behalf of Penn-Olin? Have they been carried on under your supervision?

A. Not under my direct supervision, but under my gen- [fol. 2251] eral supervision.

Q. Under whose direct supervision have they been carried on?

A. This is a part of the regular sales function under Mr. Johns.

* * * * * * *

[fol. 2252] Q. Have you made an effort to refresh your recollection completely with regard to the formation, the negotiations leading up to the activities following the creation of Penn-Olin Chemical Company?

A. I have made some effort to refresh my memory. I am not sure that I have been completely successful.

Mr. Freed: Would you mark this as Plaintiff's Exhibit 3 for identification.

(Sales contract Number SC-7 between Olin Mathieson and West Virginia Pulp and Paper Company was marked "Plaintiff's Exhibit No. 3 for Identification.")

By Mr. Freed:

Q. I would now like to show you document which has been marked Plaintiff's Exhibit 3 for Identification and I will ask you to state what it is.

A. This is a sales contract between Olin Mathieson and the West Virginia Pulp and Paper Company covering sale of 500 tons of sodium chlorate during the calendar year 1961 for delivery to their various plant locations.

Q. And I ask you, Mr. Logan, whether you became familiar with the execution of that contract prior to my handing you the contract this morning?

A. I have no recollection of having seen this one specifically before.

[fol. 2253] Q. Do you know whether that contract is entered into by Olin on behalf of itself alone or as representative of Penn-Olin?

Mr. Connelly: I object to that upon the ground that the document speaks for itself.

Mr. Freed: Are you instructing the witness not to answer the question?

Mr. Connelly: Yes.

By Mr. Freed:

Q. Mr. Logan, do you know whether Olin on behalf of Penn-Olin solicited West Virginia Pulp and Paper Company in 1960 for sales of sodium chlorate?

A. For sales in 1960?

Q. For delivery in 1961.

A. Would you restate that now in its present context?

Mr. Freed: Will you repeat the question, please?

(The Reporter then read the last two questions.)

A. This contract, and I didn't observe the date on which it was made, but I assume that it was made prior to the first of the year——

(Mr. Freed hands Plaintiff's Exhibit #3 to the witness.)

A. —it is dated December 22. So that this solicitation was made for this sale in 1960 leading to this contract.

[fol. 2254] By Mr. Freed:

Q. I don't believe you answered the question whether this was made on behalf of Penn-Olin.

A. This is made on the basis that we are developing the sales of sodium chlorate which subsequently may be supplied from Penn-Olin's facility after it comes into production.

Q. I ask you, Mr. Logan, whether the profit or loss on this sale of sodium chlorate to West Virginia Pulp and Paper Company will ultimately appear on the books of the Penn-Olin Chemical Company or whether it is exclusively for the account of Olin-Mathieson.

A. I can't answer that for a certainty because at the moment it is on Olin's books and I don't know that a final decision has been made as to the disposition of the profit and loss.

Q. Mr. Logan, do you know as a fact whether Olin as a representative of Penn-Olin solicited sales of sodium chlorate in the year 1960?

A. As an agent of Penn-Olin?

Q. Yes, sir.

A. Not in the common accepted sense of an agent because there is no agency agreement, but with the understanding that we are in the process of developing a market [fol. 2255] for Penn-Olin.

Q. I ask you, Mr. Logan, whether you know whether Olin solicited sales in the year 1960 as an agent of Penn-Olin in the sense that revenue or profit from those sales

would appear on the books of Penn-Olin Chemical Company?

A. Solicitation in 1960 that pertained to 1961 business is expected probably to be reflected on Penn-Olin's books at the end of 1961.

Q. Then I ask you whether Olin-Mathieson acted as an agent of Penn-Olin in the solicitation of sales in the year 1960.

Mr. Connelly: I object to the form of the question as calling for a legal conclusion. I have no objection to having the witness answer it if he can do so.

A. Well, in the context of what I have just described as being the relationship if this is an agency, then the answer is yes.

Q. Mr. Logan, has a sales agreement between Penn-Olin and Olin-Mathieson been executed yet?

A. I don't believe one has been executed.

Q. Is there an oral understanding that exists between the parties to this venture with respect to a sales agency relationship between Olin and Penn-Olin?

A. There is an understanding that we would undertake [fol. 2256] to make sales of chlorate and develop a certain volume during the present year leading to the supply of this volume from Penn-Olin after its productive facility was in operation.

Q. Mr. Logan, I have a document which in the upper right hand corner is entitled, "Sales Agreement, 7th draft, 3-8-61," which begins, "This agreement made as of the second day of January, 1961, between Penn-Olin Chemical Company and Olin Mathieson". To your knowledge is there a later draft?

(Document handed to the witness.)

Q. I prefer that you not turn over the first page. Is there a later draft that has a different title than that? To your knowledge has a sales agreement later than March 8, 1961, been drafted?

A. I have no certain knowledge of a later draft. There might be.

Q. Mr. Logan, who is responsible for the drafting of the sales agreement between the companies?

A. This is primarily the responsibility of the sales head, Mr. Johns, and his legal advisers within our company and the counterparts in——

Q. To the best of your knowledge are the provisions of the sales agreement which was drafted in March, 1961, being presently used as a basis upon which Olin acts for Penn-Olin?

[fol. 2257] A. I am not certain in respect to all details, but I would say in general this is probably correct.

(Discussion off the record.)

Q. Paragraph 13 of the draft agreement to which I have just referred reads as follows:

> "Market Development. Until such time as the plant mentioned in Section 1 of this agreement is completed and in production, sodium chlorate may be purchased from third parties for Penn-Olin's account by Olin with Penn-Olin's approval for sale by Olin and will be accounted for as follows:—"

And the agreement then lists various provisions.

Can you tell us the date on which that arrangement by which Olin would purchase for the account of Penn-Olin from third parties first came into operation by the parties to this joint venture?

A. I don't recall the exact date, no, sir.

Q. Can you give us an approximation?

A. I would estimate some time in the fourth quarter of 1960, but I am not positive of that.

Q. When was the first time that you were a party to any discussion with regard to Olin's sale of sodium chlorate for the account of Penn-Olin prior to commencement of production by Penn-Olin?

[fol. 2258] A. This probably goes back informally near to the time of deciding to proceed, the question would be, What are we going to do in the interim and how do we handle sales between then and the time the plant did come into production? So this might have been discussed at various times over the last year or year and a quarter, say.

Q. When to your knowledge did Olin first begin to act in terms of that understanding?

A. In the Fall of 1960 obviously looking to the signing of contracts such as the West Virginia contract previously displayed.

Q. In other words, Olin began to solicit sales for Penn-Olin's account in the Fall of 1960?

A. Solicit sales for Olin's account in the sense that Olin is billing the goods and has the contract.

. . . . . .

[fol. 2259] By Mr. Freed:

Q. Was Olin soliciting sales of sodium chlorate in the Fall of 1960?

A. Obviously, yes, sir.

Q. In making such solicitations was it doing so on behalf of Penn-Olin or exclusively on its own behalf?

A. It was doing so in its own name with the recognition that at the initiation of Penn-Olin production the supply of chlorate under the contracts it was consummating would [fol. 2260] initiate from Penn-Olin's production.

. . . . . .

[fol. 2261] Q. In the arrangement which you and Mr. Shanaman designed for the sale of sodium chlorate was [fol. 2262] Olin to be Pennsalt's agent?

A. Is the question, was Olin acting as Pennsalt's agent?

Q. Yes.

A. I guess you could call this as a sales agent for Pennsalt, yes.

. . . . . .

[fol. 2263] Q. Did there come a time after the 1958 arrangement came into operation when you and Mr. Shanaman had further discussions with respect to the produc-[fol. 2264] tion of sodium chlorate in the East?

A. There were several conversations from this date forward, and at exactly what time production in the East was first discussed I can't recall.

Q. Without isolating then any particular date, can you give us the sequence of conversations or the sequence of events which transpired in your negotiations or discussions with Mr. Shanaman on this subject?

A. Well, I believe at the end of 1958, when we were looking to 1959, we had some exchange of correspondence or conversations with regard to the available tonnage in 1959 and subsequently; and it is my recollection that Mr. Shanaman began to express concern over the fact that the market developing on the West Coast was beginning to use chlorate at a faster rate than he had anticipated and therefore there was a question as to how long he could continue to make surplus available in reasonable quantities for movement East because he naturally wanted to supply his natural market near his plant.

Now, exactly when these situations developed, I can't give you exact dates.

Q. Leaving the question of date aside, what was the substance of the first conversation that you had after the 1958 arrangement became operative with regard to produc- [fol. 2265] ing sodium chlorate in the East?

A. Without regard to date we undoubtedly had a conversation to the effect that we were not interested in continuing on a very small amount of chlorate, were not interested in continuing our sales effort on that, and how could we get more chlorate to match the demand that we had in effect begun to create through our effort. And this led to conversation about the possibility of Pennsalt establishing their own production at Calvert City, where they had a plant, or us putting up a facility or us doing the job jointly as via the Penn-Olin route.

Q. What were the considerations discussed by you and Mr. Shanaman with respect to each of these alternatives?

A. It was generally recognized by both of us that we had a contribution to make through joint effort in terms of our experience in the market place and our already established sales position, and that, on the other hand, Pennsalt had established chlorate operating experience, had an established physical location which was reasonably logical for such a new plant to be installed at and probably had more experimental knowledge of chlorate production than we had.

Q. You referred to Olin's already established sales position. What does that phrase mean?

A. I mean that by this time we had already been out selling on behalf of Pennsalt's production.

[fol. 2266] Q. So you are referring then to the position that you had established in selling sodium chlorate?

A. This is correct.

Q. You mentioned Pennsalt's established location. What location was that?

A. Their plant at Calvert City, Kentucky.

Q. Do you recall when Calvert City first became a subject of discussion between you and Mr. Shanaman in respect to a proposed or possible sodium chlorate production facility?

A. This would be in the back of the thinking ever since we started talking about production because we both recognized that you would not want to establish such a facility at a brand new plant location if you had one satisfactory, where a plant was already established.

Q. By your answer do you mean that Calvert City was back of the thinking beginning in 1953?

A. No. In 1953 we had not progressed to the stage where we were thinking of chlorate production. The 1953 arrangement was on a totally different basis.

Q. Well, then, can you recall in terms of time, in terms of the year when Calvert City first became a subject of discussion?

A. I would assume that it was in the minds of both parties from the date we started to make sales for Pennsalt. Whether or not it was mentioned at that time I do not recall. [fol. 2267] Certainly as we approached a decision regarding production we would have to very thoroughly weigh Calvert City as a location.

Q. What were the considerations that you weighed with respect to Calvert City?

A. The fact that there was an existing operating facility already there so that many of the services and capital costs that you are forced to make in starting at a new location would not have to be made, and therefore this had certain economic advantages.

Q. Were there any other advantages that you discussed?

A. Only the advantage that it was reasonably satisfactory as a location from a geographical distribution point to the consuming market that was developing.

Q. Beginning at the time of your first conversation with Mr. Shanaman touching on production of sodium chlorate

at a location other than Portland, Oregon, did Olin thereafter consider producing and selling sodium chlorate on its own?

A. This consideration was always a part of our total thinking. It did not consider it concretely to the extent of completely evaluating a specific project at a specific location.

Q. This thinking had arisen within Olin prior to the time of any conversations with Mr. Shanaman, is that correct?

[fol. 2268] A. There had been people in our company who thought we should be in the chlorate business from back in the 1930's.

Q. And how late did consideration within Olin continue of establishing an Olin production facility of its own?

A. I think it continued up until the time when we talked with Pennsalt and agreed that the best solution was a facility that we both participated in.

Q. And what was that date?

A. Well, we were approaching this late in '59 and then we came up early in '60 and actually began to formalize the thinking on it.

Q. Can you isloate a particular meeting or a particular conversation at which you were present when this materialized?

A. I think one of the meetings that was held in New York either late in 1959 or very early in 1960 brought this issue to a head, and it was generally agreed that we were going to have to act, and act fairly rapidly, and the general conclusion was, well, action together was better than action independently, for several reasons.

Q. What were the reasons?

A. Well, as of that time each of us had an established position that he could put into the joint program that neither of us had acting independently.

Q. Were there any other reasons?

[fol. 2269] A. This is the crux of the reasoning, that by proceeding together at this time we had a much sounder project than either party would be able to establish on his own.

Q. What were the positions or advantages which Pennsalt possessed that Olin lacked independently?

A. Pennsalt possessed actual operating experience and a knowledge of equipment that was currently producing chlorate.

Q. Would that be the principal reason?

A. This is the principal one. The other one, the matter of a geographical location with a going plant was a factor, but actual operating experience was probably the principal reason.

Q. And what was it that Olin had that Pennsalt lacked?

A. Well, Olin had a sales force that covered the marketing area and had already established itself as a seller of sodium chlorate.

Q. Was that its principal advantage over Pennsalt?

A. This was its principal advantage, yes.

Q. What were the subsidiary advantages, if any?

A. Well, each of us had a certain amount of experimental development knowhow that we could throw into the operating and use area, but this was, in Olin's case, a less well-defined reason.

Q. At this time was Olin capable of entering the production of sodium chlorate?

[fol. 2270] Mr. Connelly: I object to the form of the question as calling for a conclusion.

By Mr. Freed:

Q. At this time what were Olin's capabilities with respect to entering on the production of sodium chlorate?

Mr. Connelly: The same objection.

By Mr. Freed:

Q. What was the state of Olin's knowledge in the production of sodium chlorate at this time?

A. Olin's knowledge was limited to generally available public information such as would have been available through the patent records and the technical literature, and secondly a modest amount of experimental work on laboratory-sized chlorate equipment.

Q. How long had the experimental work been going on?

A. Off and on clear back into the 1930's.

Q. How far had it progressed?

A. To a small laboratory unit.

Q. Was that unit capable of producing sodium chlorate in the laboratory?

A. I don't have any recollection of the specific data but I assume it produced some chlorate, yes.

Q. Were there any people in the Olin organization at this time who believed Olin to be capable of producing sodium chlorate commercially?

[fol. 2271] A. This is a very general question because at any time you can find people in Olin who believe Olin is capable of anything.

Q. Were there any people to your knowledge who believed Olin to be so capable?

A. I think there were people who thought that we could probably buy or find operating experience somewhere outside our organization and ultimately develop a satisfactory operation.

Q. Did any such people occupy positions of responsibility within your organization?

Mr. Connelly: Would you mind placing on the record, Mr. Freed, a statement of what you conceive to be the relevance of this line of inquiry?

Mr. Freed: I would prefer to make no statement on that at this time.

Mr. Connelly: Well, I shall object to the question then as not related to any issue in this case that I think of at the moment.

Mr. Freed: Would you read the question please?

(The Reporter then read the last question.)

Mr. Connelly: You may answer the question if you understand it.

A. I think people with some degree of responsibility felt that we could probably do this.

[fol. 2272] By Mr. Freed:

Q. Who were those people?

A. I am sure the man who was in charge of the electrochemical research work felt they could be done.

Q. Who was that, sir?

A. Well, at that stage it would have been Dr. Wojcik and Dr. Gardiner.

Q. To your knowledge were they the only people on a managerial or responsible level who held that view?

A. I think so. At this stage we would not have accepted their thought on this matter without weighing it very, very seriously.

Q. When did their views in this regard first come to your attention?

A. Well, again, Mr. Freed, I have known ever since 1930 that Dr. Gardiner felt that we could ultimately develop a satisfactory chlorate cell.

Q. When to your knowledge did Mr. Wojcik or Dr. Gardiner first make known the view that Olin was capable of producing sodium chlorate commercially?

A. I don't think they ever actually made this view except as an expression of a personal opinion. There was no formal statement on their part that, "Yes, we can do this." Actually, at this time and leading up to this time we had explored other methods of making chlorate parallel to this [fol. 2273] consideration.

Q. Can you recall when their personal opinion in this regard first became known to you?

A. No. This would be a matter of records, I assume. I don't have any personal recollection of it.

Q. What are the parallel avenues that you have just referred to?

A. Chlorate can be made chemically, but it has not been proven to be economically sound to do so.

Q. When was that determination made?

Mr. Connelly: What determination?

Mr. Freed: Would you re-read the answer?

(The Reporter than read the last answer.)

Mr. Freed: I will strike the question.

By Mr. Freed:

Q. When did it prove not to be economically sound to do so?

A. Sometime within the last three years our laboratory people submitted a report to this effect.

Q. What were the bases on which the views of the Electrochemical Research Department were rejected by your-

self and by management with respect to Olin's own ability to enter this production?

Mr. Connelly: I object to the form of the question as assuming facts not yet in evidence.

[fol. 2274] Mr. Freed: Perhaps I didn't understand your objection. What are the facts that were assumed in there that were not in evidence?

Mr. Connelly: The facts stated in the forepart of your question.

By Mr. Feed:

Q. Did Dr. Wojcik and Dr. Gardiner's views in this respect come to the attention of yourself and of the Olin management?

A. Only through the normal research reporting mechanism whereby they would submit information on the effort that they had carried out and the conclusions reached therefrom.

Q. Did you participate at any time in discussions on the subject of Olin's ability to enter into the production of sodium chlorate?

A. I don't recall any formal conversations on this, but this is the type of subject that could very easily have been considered incidental to some of these other discussions.

Q. Did you participate in any such discussions?

A. I recall no specific discussions on that subject.

Q. Has there been any evaluation on the part of Olin of its own ability to enter the production of sodium chlorate?

A. Only the evaluation that a management close to all facets of the business is constantly making and a precept [fol. 2275] that was pretty well established, that we would not go into something that was outside the scope of our then established production experience unless we got such operating experience in other directions.

Q. Was this a determination of inability on the part of the company or of lack of desire on the part of the company to enter this field?

Mr. Connelly: I object to the form of the question as calling for a conclusion.

Mr. Freed: Would you re-read the witness' last response?

(The Reporter read the last answer.)

By Mr. Freed:

Q. What was this pretty well established precept based upon?

A. This was a precept that Mr. Block had regarding production generally, and at this stage he was in charge of the chemicals activities, and he would not have permitted us to go into the chlorate business based upon the status of our technical knowledge as of that time.

Q. Did you discuss this matter with Mr. Block?

A. Yes.

Q. Do you know what his views with respect to Olin's technical knowledge were based upon?

A. Well, I know the state of Olin's technical knowledge [fol. 2276] myself, and I have seen his views expressed on other things of similar nature.

Q. Can you tell us then what those views are based on?

A. The views are simply based on one concept of management which is that you would not get into a business that you did not have actual operating experience in either through your own process development up through semi-commercial operations or you acquired outright from someone else who had such experience and knowledge.

Q. Does your last answer mean that unless Olin were to acquire knowledge and technology from the outside that Olin would not go into a field it had not previously been in? Is that what your answer meant?

Mr. Connelly: I will object to that. I think the answer is perfectly clear and speaks for itself on the record.

Mr. Freed: Would you read the question, please?

(The Reporter then read the last question.)

Mr. Connelly: Will you read the witness' previous answer, please?

(The Reporter then read the witness' last answer.)

Mr. Connelly: Having had that answer read back to you, Mr. Freed, do you now agree that it is phrased in

the alternative and it is phrased in response to your ques-
[fol. 2277] tion as to what Mr. Block's views were based upon?

By Mr. Freed:

Q. Mr. Logan, is it correct that the views you have just expressed were not only those of Mr. Block but of yours?

A. I think this is a sound view, yes.

Q. Would you tell us what you mean by the first part of your answer which deals with Olin's decision or non-decision to enter into a business on which it has no operating experience? I don't understand what that answer means.

Mr. Connelly: Do you mean you don't understand what the term "operating experience" means? Is that your question? Because we can be here in perpetuity if we must always have a general question followed by an answer and then a question as to what does the answer mean. If there is some portion of it you desire to ask the witness about, phrase your question accordingly.

By Mr. Freed:

Q. Mr. Logan, did Olin consider entering the production of sodium chlorate by acquiring experience and information from outside the organization?

A. This was considered in a very general way, yes.

Q. And what steps were taken in furtherance of that consideration?

A. I don't know that any extensive steps were taken
[fol. 2278] because it was recognized that this would involve a period of time which would further delay getting the project into production which at this stage it had become apparent was most desirable at the earliest possible date.

Q. Why was it desirable to enter at the earliest possible date?

A. The sales effort was generating outlets. The surplus supply was drying up, and if we were going to take advantage of the circumstances that prevailed, we had to move reasonably fast.

Q. Were there any other considerations which entered into your determination to act quickly?

A. I think what I have just stated was the principal reason.

Q. Were you aware of the interest of any other companies in entering this business at the time that you were considering it?

A. No companies not already in the business, no.

Q. Were you aware of the interest of Columbia Southern to enter this business?

A. I have assumed ever since they talked to us about an arrangement for Canada that they would have some consideration of getting into the business in the United States, but I had no concrete evidence of that.

. . . . . .

[fol. 2279] Q. Mr. Logan, do you recall attending a meeting in Philadelphia in February, 1958, with Messrs. Drake, Shanaman and Land in connection with a discussion of the sodium chlorate operations in the South?

A. I have a rather dim recollection of this meeting, yes.

Q. To the best of your ability could you tell us what transpired at that meeting?

A. I think this was just a meeting following the pattern of the discussions that I had with Shanaman as to where this whole program was leading, and Mr. Land was introduced into this meeting because I believe Pennsalt had some plans to change the organization and Mr. Shanaman was involved in this picture, and this was in effect bringing the other members of his organization up to date with the conversations that he and I had been having. I don't know of any special subject matter that was discussed at that meeting.

Q. I show you a memorandum to the file prepared by you on February 4, 1958 and ask you whether that document enables you to fill us in a little more on the subject matters that were discussed and the conversations that took place at the meeting in Philadelphia.

A. Well, the memo pretty well describes what took place. [fol. 2280] It was an updating of the conversations that we had had, and, as stated there, there was thinking on Pennsalt's part that production was becoming more at-

tractive and that we would have to face up to that issue before too long, and it referred to the matter of perchlorates because this was a rising development in connection with propellants.

Q. A reference is made in this memo to "our HEF operation". Could you enlighten us on what that was?

A. "HEF" refers to high energy fuel.

Q. Is it true that there is a company in the business known as "HEF"?

A. There is now, yes.

Q. It did not exist at the time of this document?

A. No. Internally we commonly spoke of some of the special propellant effort in terms of "HEF".

Q. I show you, Mr. Logan, an extract from the minutes of the Division Management Meeting of your division held on June 8, 1959, which begins, "Subject facility—" referring to a chlorate facility—"will be discussed this week. It may be either on a joint venture or independent basis." And I ask you whether you can elaborate for us on the subject of the report or conversation at the meeting in which this minute was made?

A. This was probably in the nature of a progress report [fol. 2281] to those members of our organization who had some familiarity with this matter and reported simply that there were further discussions as to proceeding on a joint basis with the production of chlorate.

Q. Is it fair to say that during this entire period, without going into each and every one of the meetings that took place, there was constant consideration and exploration by the two companies wtih a view towards the possibility of a joint venture, and that each of the documents that have been displayed today are simply evidence of the continuing interest in this matter?

A. From the first conversations with Mr. Shanaman the possibility of either of the parties producing independently or both of the parties producing jointly were alternates that were discussed constantly up until the time of the final decision.

Q. Up to the time of the final decision then you did not know whether the exploration you were making in the Southeast would result in a partnership or competition between your company and Pennsalt, is that correct?

A. Did not know for certain, no,—that is correct.

Q. But during this time your principal belief was what?

A. Well, I think it was my principal belief that we would [fol. 2282] come to the conclusion which we did, namely, that the joint project was more sound from all aspects than operation independently.

Q. Did there come a time in the latter part of '59 when you had reason to doubt whether a joint venture would materialize?

A. I think there were doubts all along the way that the economics could be proven out, but I don't know that there was any specific time when there was a more serious doubt than some other time.

Q. I show you a document which is numbered "Olin D-78" and is from J. O. Logan to J. G. Johns, dated November 18, 1959, and ask you to direct your attention to the underlined portion of that document. I wonder if you might simply read into the record the portion which has been underlined and give us any explanation that there may be about the apparent pessimism reflected in that statement.

Mr. Connelly: I object to the form of the question in characterizing it as pessimism.

By Mr. Freed:

Q. I will rephrase the question and ask you whether you would read the underlined portion into the record and state the basis upon which your estimate of probability was made?

A. The underlined statement is "Since in all probability [fol. 2283] we will not proceed with the joint production facility——"

Q. If you wish to finish that, you may do so.

A. Do you want the rest of the sentence?

Q. Yes, so the record is complete.

A. "we should not over-contract at least until there is further clarification following my meeting with Shanaman."

Mr. Connelly: May the record show, Mr. Freed, that the first clause of that sentence which you described as being underlined was underlined by you?

Mr. Freed: Correct, sir.

A. I have no direct recollection of the reason for making that statement. Whether it was something that Shanaman had introduced or whether it was something that we had introduced such as a shortage of capital, or some other reason, I don't know exactly what prompted that statement at that time.

Q. Were the Vickers-Krebs negotiations going on at this time?

A. I don't recall. The record of those instructions versus this date would prove that point.

Q. This is in November, 1959?

A. I would expect that the Vickers-Krebs negotiations had gone on prior to this time.

Q. Had they terminated as of the date of this memorandum?

[fol. 2284] A. I am not sure of that.

Q. Do you have any recollection of a relationship between the Vickers-Krebs negotiations and this statement of probability that there would be no joint venture?

A. No.

Q. Did you participate in the renewal of the chlorine dioxide agreement with Pennsalt in 1957?

A. This was an extension of the original agreement, as I recall. I think I participated to the extent of knowing that it was taking place. I don't know that I actually drew the papers up. I might have even signed it.

Q. Do you recall any discussion at the time of renewal about the application of Olin's license to Pennsalt to sales in Japan?

A. Yes. As I recall, Pennsalt either formally or informally sought to have the agreement extended to include Japan. At some stage prior to the consummation of this extension I discovered that our own International Division was having conversations with people in Japan on a related matter, and, as I recall, we subsequently told Pennsalt that we could not extend their agreement to include Japan.

Q. Do you recall participating in a meeting in Philadelphia on February 4, 1960, one week before the joint venture agreement was signed, at which a number of repre-
[fol. 2285] sentatives of Pennsalt, headed by Mr. Drake and Messrs. Wood, Williamson and Gardiner, together

with yourself, met to discuss the contemplated venture?

A. Yes.

Q. Do you recall the discussions that took place at that meeting with respect to consideration of Calvert City and Chattanooga as two possible locations for a joint plant?

A. This meeting brought together a number of the technical people from the two companies, and, as I recall, we formulated a plant of what would have to be done in order to proceed. By that I mean, we determined that we would have to set up a technical survey team and we would have to generate certain agreements with respect to various aspects of this project.

I think we concluded it would be desirable to evaluate the marketing position out of Chattanooga versus Calvert City so as to be aware of any outstanding difference between the two points, if such existed.

Q. Do you recall whether there was any difference of opinion among the people present at that meeting with respect to which of the locations should be picked?

A. There might have been differences of opinion because most of the people present would be analyzing the situation in the light of their limited view. I think it was rec- [fol. 2286] ognized, however, that we needed a transportation study from both points in order to be certain that we were not obviously on the wrong track in proceeding at Calvert City.

Q. Can you recall who from Olin urged that Chattanooga be chosen as the location?

Mr. Connelly: Well, I am not sure that it has as yet appeared that someone did so urge, Mr. Freed.

Mr. Freed: Excuse me, Mr. Connelly. Let me lay the basis for that.

By Mr. Freed:

Q. Did anyone from Olin to your recollection urge that Chattanooga be chosen as the location of the joint plant?

A. I think there were some people in the Sales Department who said to themselves, "It would be nice if this facility could be located at Chattanooga," and therefore they probably wanted to see this information develop to prove their point, or to disprove it.

Q. As between the Olin representatives who were present, namely, yourself, Mr. Gardiner, Mr. Williamson and Mr. Wood, can you recall which one or more of them, if any of them, urged that Chattanooga be selected?

A. I don't know that any of them would because none of them represented the Marketing Organization as such. Wood and Gardiner represented the technical end of the [fol. 2287] business, and they would recognize as well as anyone their limitations with respect to knowhow.

Q. Mr. Wood's position at this time in Olin was what, sir?

A. He is the chemical engineer in the Operating Department.

Q. Do you recall any discussion at that February 4 meeting of the problem of prorating over the entire market?

A. I don't understand what you mean by "prorating".

Q. I show you, sir, a copy of some handwritten notes which are labeled "Olin D-73" and are marked "Logan", presumably to indicate that they came from your files. The notes carry the date February 4, 1960, and underlined in red are the terms "prorating over entire market" and on the second page "problem of one-sided need".

I ask you whether reference to those notes, if that is a copy of your own notes, whether either of those statements reawakens any recollection on your part of what the reference was that was being made?

A. The reference to "prorating over entire market" meant that this analysis of freight rates was based upon a proportion of the total consuming market on the assumption that we would supply a prorata share of every outlet.

We had no other basis on which to analyze the freight [fol. 2288] cost to the destinations. So we took a market and simply prorated our production against the total and said, If we spread our production uniformly across the market, this is the way the freight analysis would shape up.

Q. Directing your attention to the second page and the underlined phrase, underlined by counsel for the Government, "one-sided need", can you state what the meaning of that term is?

A. "One-sidedness". My writing is very poor.

This, as I recall, refers to a discussion about the joint plant being put at Chattanooga, for which this tabulation shows freight rates in relation to Calvert City. And the one-sidedness came about from the fact that under such a decision the facility, the physical assets, and the operating control would also be at the location, namely, an Olin facility, and Olin would also be in complete charge of the marketing operation. And it was felt that this represented a completely one-sided pattern where a party would put in fifty per cent of the capital and yet everything would end up in the complete control of the other partner. This would be the same situation as if the plant went up in Calvert City and Pennsalt was doing all the marketing and Olin was just an investment partner.

Q. Did the discussion which took place on February 4 [fol. 2289] with respect to one-sidedness take into account Pennsalt's complete operation of the plant at Chattanooga, or was there something else contemplated?

A. No; this would be an operating impracticality to put the plant at our plant site and have it operated by them. So this was not considered as being a practical solution at all.

Q. Is it correct then to say that the alternative that faced you in the problem of one-sidedness was that of Olin operating and Pennsalt selling in one locality or Pennsalt operating and Olin selling in another locality? Is that an alternative that was discussed or that was frowned upon?

A. I don't recollect that this alternate was even discussed.

Q. In other words, at no time was the possibility of Pennsalt doing the selling discussed? This did not enter any discussions?

A. I don't think it was.

* * * * * * *

[fol. 2290] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 409

New York, N.Y.

EXCERPTS FROM DEPOSITION OF RUSSELL HOPKINSON TAKEN ON SEPTEMBER 14, 1961

* * * * * * *

[fol. 2291] RUSSELL HOPKINSON, being first duly sworn by the notary public, testified as follows:

Direct examination.

By Mr. Freed:

Q. Sir, would you state your name and address for the record, please?

A. Russell Hopkinson; I live at 131 East 69th Street.

Q. And Mr. Hopkinson, what is your position with the defendant Olin Mathieson?

A. I am vice president, senior adviser.

Q. And how long have you held that position?

A. Since September 1st of 1960.

Q. Prior to that time, what was your position with Olin?

A. I was vice president for commercial development.

Q. And that title ran starting at what date?

A. June 6, 1958.

Q. If you have the sequence of your positions with the company, could you just give us a quick summary of them running backwards in time, just mentioning the date at which each prior position with the company commenced?

[fol. 2292] A. Before that I was executive vice president, and that title—I received that title on January 18, 1957.

Prior to that, I was vice president for development. That title was given to me on September 9, 1954.

Prior to that, I was corporate vice president for research and development. I received that title on January 15, 1954.

Prior to that, I was still corporate vice president for commercial development. That title I received on May 1, 1953.

Prior to that, I was vice president for commercial development from March 1, 1953.

Prior to that, I was corporate vice president for the Drugs and Pharmaceuticals Division from October 1, 1952.

Prior to that, I was corporate vice president and general manager of the Petrochemicals Division, which title I received on June 1, 1952.

Q. If I may interrupt you, sir——

A. There is one more.

Q. Okay, I was not interrupt you.

[fol. 2293] A. I was administrative vice present for the Mathieson Hydrocarbon Chemical Corporation, a subsidiary corporation, and that title I received on January 1, 1950.

Q. Prior to 1950, where were you employed?

A. I was self-employed before that for two years as a consulting chemical engineer.

Q. And prior to your self-employment?

A. I was in charge of commercial development for the United States Rubber Company.

Mr. Freed: Off the record.

(Discussion off the record.)

Q. Did I correctly understand you to say, sir, that at two different points, first beginning in May of '53 and then beginning in June, 1958, you held the same title of corporate vice president of commercial development?

A. I believe that's correct.

Q. In your present capacity as vice president, senior adviser, what is the scope of your responsibilities?

A. I am supposed to advise and consult with the president and his staff relating to operations.

Q. In the position that you occupied in the preceding two years, what were your responsibiilities?

[fol. 2294] A. I was assisting the divisions in developing new products, processes, and raw materials sources.

Q. Would it be correct to say, sir, that in the present structure of Olin, your principal specialty is chemicals?

A. Yes, I think so.

Q. Can you tell us, Mr. Hopkinson, the names of the committees or groups within the Olin corporate structure, management, of which you are a member?

A. I am only a member of one committee.

Correction: I think I am a member of two committees. One is the—what we refer to as the CAR committee, which passes on capital appropriation requests. Then I am also a member of a newly appointed and as yet inactive committee which reviews raw materials sources.

Q. How long have you been a member of the capital appropriations committee?

A. Since its formation. I don't remember when that was.

Q. Approximately how far back does it go?

A. About two years ago.

Q. When was the first time that a sodium chlorate project came to the attention of the capital appropriations [fol. 2295] committee?

A. Very shortly after its formation. I would guess that it is somewhere about in the first three months of 1960.

Q. Is it the function of the capital appropriations committee to pass on the Industrial Chemicals Division's Whither Reports?

A. No.

Q. Can you tell us where in the corporate structure, above the Chemicals Division level, Whither Reports are considered?

A. They are considered by the corporate staff committee, of which I am not a member.

Q. Are the decisions or actions of the corporate staff committee transmitted to you? Do you perform any function with reference to the decision-making process of that committee?

A. Occasionally.

Q. Is your role with reference to them only an advisory one?

A. Yes.

Q. And if recommendations or projects survive the corporate staff committee's deliberations, will they come to your attention at the same time that they go to Mr. Os- [fol. 2296] borne?

A. Not necessarily.

Q. Then with reference to any actions of the corporate

staff committee, you would have to know what the specific project was in order to be able to say whether you played any role with respect to it; is that correct, sir?

A. That's right.

Q. Have you at any time been a member of the corporate staff committee?

A. Yes.

Q. Could you tell us the years of your membership there?

A. I don't remember when my membership was discontinued. The corporate staff committee was formed when Mr. Osborne became president.

Q. Can you tell us when that was, sir?

A. I don't remember.

Q. Can you give us an approximation? Was it 1950, 1958?

A. I believe it was during 1958.

Q. Were you a member at the outset of that committee's function?

A. Yes.

[fol. 2297] Q. Approximately how long did your membership on the corporate staff committee continue?

A. Until about the middle of 1960.

Q. During your tenure of office on that committee, did the Whither Reports of 1958, 1959 and 1960 come before the committee for evaluation?

A. Yes, they did.

Q. With reference to budgets prepared by the divisions of Olin, can you tell us how they are processed in the corporate structure above the divisional level?

A. Currently?

Q. First, directing your attention to the time beginning 1958.

A. Did you say prior to the time before '58?

Q. Commencing in 1958, would you bring your answer up to the present time?

A. Budgets were brought to the attention of the corporate staff, recommendations were made by the staff and further review of the budgets were made by the comptroller.

Q. That was in 1958, sir?

A. Yes. I have no knowledge of how it is done now.

[fol. 2298] Q. During the time you were a member of the corporate staff committee, who was the comptroller?

A. Mr. Otterstrom, the present comptroller.

Q. What is Mr. Otterstrom's first name?

A. William.

Q. Would you describe for us, sir, the first time that you performed any work or took any action, either with Olin or prior to coming with Olin, on any matter that related to sodium chlorate?

A. I don't remember the exact date, but it must have been subsequent to May, 1953, at which time I reviewed, during the next few years, many of the projects that the company was engaged in. Sodium chlorate was among these.

Q. Without pinpointing any specific date, can you tell us your earliest recollection of the company's interest or activity in the sodium chlorate field?

A. Yes. I found that we had developed a process for bleaching pulp, using a raw material sodium chlorate, and that we were not manufacturing sodium chlorate, but purchased it from others, and I raised the natural inquiry of why we didn't make our own sodium chlorate.

Q. I would like to show you, Mr. Hopkinson, a brief [fol. 2299] memorandum dated July 5, 1956, which in a previous deposition was marked Plaintiff's Stein Exhibit 5, and ask you whether that memorandum enables you to pinpoint the time in which you first became aware of or took an active interest in Olin's sodium chlorate activities, or potentialities.

A. Yes, this may be the first written record of my interest in it.

Q. I will show you, sir, Stein Exhibits 6, 7 and 8, which are respectively dated July 10, July 13 and July 18, 1956, which appear to form part of one transaction or one period of interest involving you, and ask you whether, after refreshing your recollection on the basis of those documents, you can tell us what triggered your interest in sodium chlorate during this period.

A. We, as I say, had developed a process for using chlorine dioxide for the bleaching of pulp, and that process required sodium chlorate as a raw material, and I felt that if others could manufacture sodium chlorate profitably, so could we.

The fact that Hooker Chemical purchased our source of supply, Oldbury Electrochemical, raised some doubts naturally whether this source would still be available [fol. 2300] to us.

A further reason for our interest in it is that sodium chlorate consumes chlorine in its manufacture, and we are manufacturers of chlorine, naturally looking for any manner in which we could upgrade the material.

Q. Was it Hooker's acquisition of Oldbury that awakened your interest or initiated your interest in sodium chlorate, or was there some other specific event or individual who first brought sodium chlorate's potentialities to your attention?

A. No, it was my responsibility for looking into each of our products, and in so doing, as I said before, this seemed a natural product for us to make.

Q. I believe, sir, you mentioned just a few minutes ago your feeling at this time, in 1956, that if others could manufacture sodium chlorate, so could Olin. Have you at any time since 1956 had occasion to change th feeling?

A. Yes. The result of these inquiries to our own people produced evidence that we did not have a process for making sodium chlorate ourselves and the economics of the process, using the information we had, indicated that it [fol. 2301] would not have a sufficiently profitable picture to warrant our going into it.

Q. Can you recall when it was that you reached that conclusion.

A. I can only recall that the result of my very first inquiry was discouraging.

Q. In other words, the conclusion which you stated previously based on the lack of a process and the absence of a sufficiently promising picture, was a conclusion that you reached shortly after your inquiry commenced in 1956; is that correct, sir?

A. That's right.

. . . . . .

[fol. 2302] Q. Directing your attention, sir, to the last paragraph of this exhibit, there is a reference to assistance that you could offer to Mr. Logan. Can you telf us, first

of all, who the "we" referred to in the last paragraph included, if it included anyone other than yourself?

A. This memorandum was written while I was vice president for development and my responsibilities were in evaluation of new products and processes and commercial activities. For this purpose I had a staff, and on my staff was Dr. Stein, who had a very wide knowledge of the chlo- [fol. 2303] rates and inorganic chemistry in general.

I also had economists who were used to making up economic evaluations, and with the aid of this team I thought that I could assist Mr. Logan in deciding whether or not this would be, as it appeared to be, a good venture to go into.

. . . . . .

[fol. 2304] Q. Well, to state it more simply, what did Olin, following this brief and rapid exchange of memoranda—what activities did the company undertake?

A. Well, this is speaking from memory. I believe that I studied the economics of the manufacture of sodium chlorate based on the information which we had in our company and came to two conclusions. First, that we did not have a process that was completed and ready to work; and, second, that the information we were able to gather did not show that the venture would be sufficiently attractive to go into it, and that it would not be sufficiently attractive to warrant doing the necessary development work to come up with a finished process.

Q. Can you recall approximately when that conclusion was reached?

A. I believe it was very shortly after this series of memoranda, and I know that the subject came up subsequently. In our research department, I believe that Dr. Wojcik himself thought that we could develop such a project, but I pointed out what I just answered here to him.

Q. Then the conclusions that you have stated were reached in the latter part of 1956; would that be correct, [fol. 2305] sir?

A. I believe so.

Q. Now, can you tell us the chronology of events which

led to Olin's renewed interest in and further studies of the potentialities of sodium chlorate as an Olin operation?

A. I can tell you only of what came to my knowledge, and the first information I had that indicated to me we might review the matter again was when I was informed that Pennsalt had a process which was a profitable one and that we had an opportunity of joining forces with them in the manufacture and sale of sodium chlorate.

Q. When did that come to your attention, sir?

A. Well, I think that was early in 1960.

Q. Between the end of 1956, when you first reached your conclusions respecting the entry by Olin in the sodium chlorate, and the early part of 1960, did you have anything to do with the course of events within the Olin organization that involved sodium chlorate?

A. No, I didn't.

Q. When did Dr. Wojcik's research and development work in sodium chlorate, following your 1956 evaluation, come to your attention? Did you know that he was continuing that work in, say, 1957?

[fol. 2306] A. Yes, I knew that work was going on.

Q. And was that work going on at your direction, or with your approval?

A. It was not.

Q. Was it going on contrary to your recommendations?

A. Yes.

Q. To whom did you make recommendations regarding sodium chlorate and when? And we are now referring to the 1956 period.

A. I don't remember to whom I gave these recommendations that I have just stated here, but it would have been to the manager of the Industrial Chemical Division.

Q. Can you recall the response or reaction by the manager of the Industrial Chemical Division to your recommendation?

A. No.

Q. Do you know, sir, why the Chemicals Division proceeded with sodium chlorate research and development in spite of your recommendations?

A. No.

Q. Did you have any conversations with any one in the company about the sodium chlorate development work

[fol. 2307] which proceeded between 1956 and 1960, prior to the awakening of your interest in the Pennsalt potentialities in 1960?

A. I can't recall any such time.

Q. Then would it be correct to conclude from your testimony that between 1956 and 1960 any activities in which Olin engaged that involved sodium chlorate were without your approval and without your participation and without any intervening interest on your part up through 1960?

A. I don't think it would be right to say it was entirely without my approval. You spoke about the research work. I felt that the whole project was not sufficiently profitable to warrant putting the research work on this subject, but I had no responsibility for operating the research, so that naturally I wouldn't get involved in such a discussion as to whether or not research would continue on it.

. . . . . .

[fol. 2308] Q. Mr. Hopkinson, the Whither Report of 1958, which bears the date of April 4, 1958, and is entitled "Industrial Chemicals Division—Division of Objectives, discusses the subject of new products, among which chlorates and perchlorates are mentioned in Section 4. Directing your attention, sir, to this reference to sodium chlo-
[fol. 2309] rate in 1958, can you tell us whether this particular portion of the Whither Report came to your personal attention in 1958 in the course of your duties with the corporate staff committee?

A. Yes, it did.

Q. Can you recall at the time this recommendation of the Chemicals Division came to your attention in 1958 the discussion which took place in the corporate staff committee with respect to chlorates and perchlorates?

A. Yes.

Q. And can you tell us what that discussion was?

A. I can't recall specifically, but I can't remember any improvement in the economic picture which showed that the manufacture of the chlorates was economically feasible until, as I pointed out before, the Pennsalt picture came to my attention.

. . . . . .

[fol. 2310] (Document above referred to marked Plaintiff's (Hopkinson) Exhibit 1 for identification.)

Q. Directing your attention, Mr. Hopkinson to the three basic criteria in developing products new to Olin Mathieson, as stated in the opening paragraph, Section 4, can you tell us which of these criteria related to chlorates and perchlorates?

A. All three of them.

. . . . . .

[fol. 2311] Q. Can you recall, sir, whether the corporate staff committee, of which you were a member at the time this report came to your attention, took any action regard-[fol. 2312] ing the discussion of chlorates and perchlorates, referred to in Section 4?

A. I think it took no action.

Q. What was the significance in the flow of organizational work of no action being taken by the corporate staff committee with respect to an objective of this kind in the Whither Report?

A. There was really not much significance. The Whither report was prepared merely to show the staff what the forward thinking was of the divisions, and, as you can see by this Whither Report, it involves an enormous number of different projects.

If one of them was outstandingly good, the corporate staff might evidence its approval. If there was some, on the contrary, strong reason for not approving it, they would also comment.

Q. In the absence of any comment by the corporate staff committee on a Whither Report section, was the division, the Chemicals Division, free to proceed along the route charted in its Whither Report?

A. Yes.

Q. At the time of this particular Whither Report, did you personally take any action to communicate your own feelings about sodium chlorate as an Olin product to the [fol. 2313] Chemicals Division or anyone else in management?

A. Everytime the subject came up, I took the same attitude, which was this is a natural product for us to get into;

it is unfortunate that we don't have a profitable process to make it by, and that we should continue to search for such a process, but not spend money on it.

Q. In what way, sir, could Olin proceed to obstain a sodium chlorate process without paying money for it, either through research and development or through purchase? In other words, can you explain to us what you meant by acquisition without paying for it?

A. That the search for such should not be costly to the corporation.

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[fol. 2314] Q. I would like next, Mr. Hopkinson, to direct your attention to the Whither Report dated April 10, 1959. Extracts from this report have previously been identified as Plaintiff's C. L. Williamson Exhibit 2.

Directing your attention, sir, to page 18 of the 1959 Whither Report, I wonder if you can tell us of the discus-
[fol. 2315] sion which took place in the corporate staff committee respecting the facts and recommendations on that page respecting sodium chlorate.

A. Now you asked—may I have the question repeated?

Mr. Freed: Repeat the question, please.
(Question read.)

A. I remember my comment at this point was that I had yet to see a process for producing sodium chlorate which yielded an 11 per cent return on the investment and would be interested in seeing such an economic evaluation.

Q. Do you recall asking for one at the time this report was submitted?

A. No, but I believe that Williamson, or someone, stated that they would produce such a report.

Q. Do you recall whether that was done?

A. No, I don't recall.

Q. Did the corporate staff committee take any action with respect to the recommendations contained on the page?

A. I don't believe so.

Q. And the effect of taking no action was the same as

you previously specified with reference to the 1958 Whither Report?

A. Yes. The division then has no authorization to do [fol. 2316] anything further than investigate these new projects, including the sodium chlorate. No moneys can be spent on them until they have prepared a proper capital appropriation request, so that there is really no need for the corporate staff to interfere with the division, if they make assertions that investments look profitable and that they have the sales capabilities on any given product.

* * * * * * *

[fol. 2317] Q. Can you tell us, sir, what the state of your knowledge was at the time this Whither Report was submitted respecting an independent Olin sodium chlorate plant versus the possibility of a joint venture in sodium chlorate?

A. I knew of nothing concerning a joint venture until some time in 1960.

Q. Directing your attention, sir, to page 45 of the 1959 Whither Report, which contains Exhibit 24 entitled "Summary of Investment Results Sodium Chlorate," can you recall, sir, any discussion of the information divulged in this exhibit?

"A. Yes, I believe that we discussed it, and we concluded that it would appear to be a satisfactory project if those results could actually be achieved. However, I do not believe that we gave those figures much consideration because it was only a Whither Report, not based on actual studies, and was not calling for action on our part."

Q. In other words, if the facts shown in this exhibit were borne out by actual studies and an actual capital appropriation request, it would have been sufficient to satisfy you, but you did not know whether the facts stated in this report were attainable; is that correct?

A. That is correct.

Q. Mr. Hopkinson, pages 47, 50 and 51 of the Whither Report, which you have in your hand, contain a notation in the upper left-hand corner of each page indicating a [fol. 2318] revision in October, 1959, and you will notice,

sir, that each of those revised pages lists sodium chlorate as a project located at Chattanooga.

A. Yes, sir.

Q. The prior pages of the report to which your referred in your earlier testimony had referred to a sodium chlorate project at McIntosh, and I wonder if you can tell us of any facts which led to the revision of this Whither Report in respect to the location of the sodium chlorate facility discussed by the Whither Report?

A. Yes, the revision—the study which led to the revision, indicated that Chattanooga was a better location from a freight standpoint.

Q. Do you recall, sir, why consideration of a change in location was undertaken?

A. No, I don't, excepting that the divisions were projecting the possibility of a chlorine plant at Chattanooga.

Q. And was the sodium chlorate plant related to the consideration of a chlorine-caustic soda plant?

A. Oh, yes, because it consumes chlorine in the manufacture of sodium chlorate.

Q. As you now recall, was consideration of an Olin so-
[fol. 2319] dium chlorate plant at all times related to consideration of an Olin chlorine-caustic soda plant?

A. Up to this time, yes.

. . . . . .

Q. Do you recall whether there was a subsequent meeting of the corporate staff committee to consider the revisions set forth on pages 47, 50 and 51?

A. No, I can't recall now.

Q. Was such a meeting held, to your recollection?

A. No, not that I know of.

. . . . . .

[fol. 2320] Q. Apart from the factor of freight equalization to which you referred, were there any other significant differences that you can now recall between your attitude towards the sodium chlorate project, as originally proposed at McIntosh and your reaction to the sodium chlorate facility to be located at Chattanooga?

A. No.

Q. Can you tell us, Mr. Hopkinson, what happened to the sodium chlorate project at Chattanooga following the October, 1959, revision of the Whither Report?

[fol. 2321] A. Well, I think the next thing that came to my attention was the possibility of a joint venture with Pennsalt.

Q. Do you recall whether, at the time it first came to your attention, the possibility of the sodium chlorate facility at Chattanooga as a wholly independent Olin project had been abandoned by decision of the corporate staff committee?

A. Well, the corporate staff committee never abandons any project. It is the division that either—that abandons it or takes it up.

Q. Can you——

A. I can say that my reaction to the possibility of a sodium chlorate plant at Chattanooga is that I highly questioned whether we had the competence to put a sodium chlorate plant and produce chlorate at the rates of return that are indicated here.

Q. In the latter part of 1959, what were your doubts based upon?

A. On the information that we had within the corporation. We had never produced sodium chlorate in any quantities at all. Therefore, we were not experienced sodium chlorate producers.

Q. Were you closely familiar, sir, with the state of re-

[fol. 2322] search and development work by Olin in the sodium chlorate field in the latter part of 1959?

A. Not closely familiar with it, but the information that came to my attention on the subject did not indicate that we had a full process.

Q. What was the information that was available to you at that time?

A. Very simply this: that we had never produced sodium chlorate in the quantity required, and the mere fact that it has been produced in the laboratory is not proof that you can produce it in a plant at a—profitably.

Q. With reference to the production of any chemical, or any product new to Olin, how could Olin's capability of producing the product outside of the laboratory come to

your attention and be a fact without approval by the corporate staff?

The Witness: Can I have that question reread, please?

(Question read.)

Q. In other words, sir——

A. I don't understand the last part of the question. I [fol. 2323] understand the first part of it. I can answer the first part by saying that the way I would know that we had such a process would be by seeing pilot plant results.

Q. And——

A. And full evaluation on a large scale.

Q. Did pilot plant results and pilot plant operation require any action by the corporate staff?

A. No.

Q. Could this be achieved completely on a divisional level?

A. Yes.

Q. Were your aware, sir, in the latter part of 1959, of the consideration which had been given in the Industrial Chemicals Division to a pilot plant operation for sodium chlorate?

A. No.

Q. Can you recall any inquiry being made at the time the Pennsalt joint venture possibility first came to your attention with reference to Olin's capability to undertake a pilot plant sodium chlorate operation of its own?

A. I first knew of the possibility of a joint operation with Pennsalt in the first three months of 1960. This was [fol. 2324] the first time that I was at all interested in the possibility of Olin having a production facility for sodium chlorate because we would be relying on information and knowledge of others that were in the sodium chlorate production business.

Q. At the time you took the Pennsalt matter under consideration in 1960, did you make any inquiries respecting Olin's ability on its own to conduct a pilot plant sodium chlorate operation?

A. I didn't need to make any inquiries. Olin could have conducted pilot plant operations, but pilot plant operations are the most expensive part of research and everything,

to my knowledge to date, indicated that this project was so low in profitability that it did not warrant our putting the money into a pilot plant to perfect the process. I still feel that way about it.

* * * * * * *

[fol. 2325] Q. Do you know, sir, of any efforts made by Olin to secure sodium chlorate production technology on a purchase basis?

A. Yes. We had a team investigate sodium chlorate production knowledge I think just prior to the time we had these discussions with Pennsalt. Based on the information this team came back with, they believed that the Pennsalt process was the best.

Q. Can you recall the identity of any members of that team?

A. I believe Dr. Gardiner was one of the members. I can't remember the others.

Q. Do you recall whether that technical survey team was set up in connection with the negotiations with Pennsalt?

A. I don't know.

Q. Do you know, sir, whether the possibility of Olin's purchase of technology had been explored prior to the time that a joint venture had been considered?

A. I don't know.

Q. Did any information come to your attention prior to the first contact with Pennsalt in 1960 regarding Olin's exploratory talks with Vickers-Krebs?

A. I remember that Vickers-Krebs was one of the com-
[fol. 2326] panies that we consulted on sodium chlorate.

Q. I believe, sir, that the records will show that Olin did consult with Vickers-Krebs and a number of other companies in connection with the joint Pennsalt-Olin technical-survey team in 1960.

My question is directed to the period prior to the creation of that joint Pennsalt-Olin team, and I wonder if you can tell us whether you were aware of Olin's own negotiations with Vickers-Krebs for the purchase of sodium chlorate production technology.

A. No, I was not.

Q. Did you ever hear of the turnkey proposal which had been discussed by Olin with Vickers-Krebs under the terms

of which consideration was given to having Vickers-Krebs construct a complete sodium chlorate plant for Olin?

A. No.

Q. At the time you first gave consideration to the Pennsalt transaction, did you consider the purchase by Olin of sodium chlorate production technology from Pennsalt or from anyone else for the purposes of completely independent Olin project as an alternative to a joint venture?

[fol. 2327] A. No, I didn't.

Q. In terms of the objectives which Olin was seeking in acquiring sufficient technology and favorable economics for a sodium chlorate project, can you tell us why no consideration was given as far as you know to the acquisition of a sodium chlorate plant or a technology as an alternative to a Pennsalt joint venture?

A. I don't know why, and I don't know that that was the case.

Q. In terms of our own consideration——

A. Yes.

Q. —of the matter, sir, can you tell us why, if it is a fact, you did not given consideration to that alternative, namely, an independent effort by Olin to enter the sodium chlorate business with the purchase of technology rather than a joint venture with Pennsalt?

A. No, I don't know why that wasn't done.

Q. Could you tell us now, sir, what objections, if any, there might have been to proceeding in the direction of an acquisition of sodium chlorate technology route rather than the joint venture route which you did embark on?

[fol. 2328] A. Well, even after you have acquired technology, or technical information, you have the problem of erecting the plant and the problems that come with starting up a plant, and unless someone else who has full knowledge of the subject does it for you, you have other expenses and problems to meet that are certainly deterrent.

Q. Is the problem which you have just described a problem which arises each time Olin considers embarking on a new product or a new project?

A. Yes.

Q. Could you describe for us the difference between your consideration of a joint venture in the case of sodium chlorate and of an independent effort which Olin makes or has

made in the past in embarking on other new products or new projects?

A. Well, if your rate of return appears to be adequate, by which I mean somewhere around 15 per cent on investment, you are warranted in spending money in perfecting or developing a process and accepting the problems that come with plant start-up difficulties, possibly changes of plant that might have to be done, but with a venture that even the most optimistic figure that we have seen here to date amounts to 11 per cent, you are not warranted [fol. 2329] in going to the trouble of starting up a new plant and accepting all the problems that come with it.

Q. Does the 15 per cent figure, to which you referred, sir, represent any corporate yardstick or corporate policy which represents a dividing line between Olin's entry on its own into a new area as opposed to Olin's entry in conjunction with another company?

A. It is a yardstick that I recommended to the capital appropriations request committee. I recommended that they have three different criteria, and in each case demanding a different rate of return, depending on, one, whether we are sellers of a product and have an assured market; two, whether we have the technology and production capability—in other words, whether we have already produced the product—and, three, whether we have neither. And the rates of return that I suggested ran from 10 per cent and 13 per cent and 15 per cent.

Q. Do I correctly understand you to mean, sir, that if the first criteria of sellers of an assured market is met, 10 per cent would be the policy objective?

A. Well, if we have the sales capabilities and the tech- [fol. 2330] nical know-how and have produced the product, the lowest one of 10 per cent would be ample. In this case, you see, sodium chlorate does not meet that criterion.

Q. And under what circumstances do the 13 and the 15 per cent figures that you mentioned come into operation under your recommended policy?

A. Well, the 15 per cent, if it is a brand new product to the company in which we have neither sales capabilities, or production know-how.

The 13 per cent, where we had the sales capabilities and had to acquire a production know-how.

Q. When were these recommendations with respect to investment policy made by you, sir?

A. About a year ago.

Q. Would that be in the middle of 1960?

A. Yes, it would be about the end—the last part of 1960. I would say the third quarter of 1960.

Q. Was each criteria adopted as the corporate policy?

A. I believe so, with some leeway in each case.

Q. Prior to adoption of this investment policy, were [fol. 2331] there any criteria applicable, particularly at the time of your consideration of the Penn-Olin project?

A. No, there was no fixed criterion.

Q. Was it the 15 per cent yardstick to which you have just referred that you yourself adopted in considering the Penn-Olin rather than an Olin venture in the early part of 1960?

A. No, I would be applying something like the 13 per cent one to it, because in my opinion we had the sales capability, but not the technical capability.

Q. So it was the absence of a return, on the basis of any information known to you, equal to 13 per cent which excluded consideration of sodium chlorate as a wholly Olin project in the early part of 1960?

A. That's right.

• • • • • • •

[fols. 2332-2333] Q. Mr. Hopkinson, turning back to the question of Olin's investment policy in the beginning of 1960, at the time the Penn-Olin venture came up for consideration and was then the subject of an agreement in February, can you tell us what Olin's return-on-investment policy was as of January, February, 1960?

A. Well, I think it was very much like the one that I finally recommended, only it was unofficial. That is, when we found we had all the elements in our knowledge for a new venture, we would accept a lower rate of return, but the lowest rate of return that we ever wanted to accept was 10 per cent.

• • • • • • •

[fol. 2334] Q. Was there any informal understanding among the members of top management with respect to the criteria under which Olin would consider a joint venture in a product?

A. I can only speak for myself.

Q. And you are aware of no policy with respect to that matter?

A. I have a very—I have a policy that I believe in.

Q. And is the policy to which you refer one that you had at the time you were considering the Penn-Olin venture?

A. Yes.

* * * * * * *

[fol. 2335] Q. Are you aware, sir, of any specific comparison that was made at the end of 1959 or the early part of 1960 with respect to return on investment with acquired technology compared with return on investment with the Pennsalt venture?

A. No.

* * * * * * *

[fol. 2336] Q. Frequent reference has been made today, sir, to Olin's return-on-investment policy, but I don't believe there has been any discussion of the manner in which particular percentages are calculated. Could you tell us whether the percentage return on investment figures, which you have been discussing today, refer to—or let me rephrase the question. Would you describe for us the manner in which you calculate return on investment?

A. Well, it is a very complicated method, but to simplify it, you take the—or we take the net profit after taxes and apply that to the total capital investment, including working capital, to obtain a rate of return on gross capital investment.

Q. Does the total gross capital investment figure include both Olin dollars as well as loans to Olin?

A. Yes. It includes every dollar necessary to pay for the facility, plus the dollars necessary to carry your inventory.

Q. And in terms of your policy, is there any distinction, or is there any significance to the distinction between a project in which all of the funds come from the company's

[fol. 2337] treasury and a situation in which part of the funds come from Olin's treasury and part are borrowed?

Mr. Barnum: Excuse me. Significance in so far as only the rate of return is concerned? Is that the purport of the question?

Mr. Freed: Yes, sir.

Mr. Barnum: Thank you.

A. There is no difference.

Q. Is there any distinction in the overall capital investment policy between a situation where you proceed completely with your own funds and a situation in which you borrow some of the funds?

A. No.

Q. Is there any policy with respect to the numbers of years for pay-out?

A. There is no fixed policy on that.

Q. Is there any general bench mark that you use in respect to the time within which Olin's investment would be repayed?

A. No general figure.

Q. Is there any criterion in this respect that would govern ventures of the type represented by a sodium chlorate plant?

[fol. 2338] A. No, I don't think so.

Q. Is there any distinction, sir, in your investment policy between situations in which the capital for a project comes entirely from Olin funds or loans and situations in which some of the capital comes from Olin and some is put up by a partner?

A. No, there should be none.

Q. When referring to after taxes in the description you gave of the investment policy, is 52 per cent always used as the tax rate?

A. Yes.

Mr. Freed: I would like the reporter to mark as Plaintiff's Hopkinson Exhibit 2 a memorandum dated February 9, 1960, to Mr. Hopkinson from Mr. Logan, to which is attached a memorandum dated February 3, 1960, signed by Mr. Williamson.

(Memorandum and attached memorandum above referred to marked Plaintiff's (Hopkinson) Exhibit 2 for identification.)

Q. Addressing your attention to Plaintiff's Hopkinson Exhibit 2, can you tell us, sir, from your examination of this document, whether you can now pinpoint the first time that the Penn-Olin venture was brought to your attention? [fol. 2339] A. Yes, this is about the time in which it was called to my attention. It may have been a few weeks earlier to this, but it was approximately at this time.

Q. Do you recall whether it was Mr. Logan who first brought the Pennsalt negotiations to your attention?

A. I believe it was.

Q. Do you recall having any discussions with Mr. Block prior to this time about the Penn-Olin venture?

A. Well, at about this time I also had discussions with Mr. Block.

Q. Can you recall Mr. Block telling you anything about the background of the Pennsalt-Olin negotiations, how they had arisen and what had happened up to the point that he spoke to you?

A. No, I don't remember.

Q. And could you answer the same question with reference to anything Mr. Logan may have told you prior to this date about the background?

A. That's right; I don't think anybody told me how these negotiations originated.

Q. And at the time when the matter first came to your [fol. 2340] attention, had the name Penn-Olin already been selected?

A. Yes.

Mr. Freed: Off the record.

(Discussion off the record.)

Q. With reference to Mr. Williamson's attachment to this exhibit, can you recall what the considerations were in choosing between Calvert City and Chattanooga as the site of a Penn-Olin plant?

A. Both sites, as I remember them, were very satisfactory. The modest amount of freight absorption indicating one slightly preferred to the other might easily be washed

out by a change in customers. That is, these freight rates are made to what you hope to sell to prospective customers, and a change—for example, if you lost a customer that is far away and you gain one that is nearby, it could easily change these freight figures.

Q. In the absence of any selectivity among customers, is your recollection in accord with Mr. Williamson's method with respect to the freight advantages being with Chattanooga, as indicated in the second paragraph of this document?

The Witness: Can I have the question repeated?

[fol. 2341] (Question read.)

A. Yes.

Q. Can you recall the specific reasons which led to the choice of Calvert City over Chattanooga?

A. The fact that Pennsalt had a chlorine plant at Calvert City and that they were offering to combine their know-how for the production of sodium chlorate and the availability of land, as I remember it, would have offset, as I remember, the freight advantage for Chattanooga.

Q. Do you recall the status of consideration being given at this time to a chlorine-caustic plant for Olin at Chattanooga?

A. Yes, I believe it was being considered.

Q. And was that plant ultimately approved and constructed?

A. I believe it is being constructed, but I am not sure.

Q. Can you recall whether land was available in connection with the Olin chlorine-caustic plant at Chattanooga on which a sodium chlorate facility could be constructed?

A. No, I don't recall.

[fol. 2342] Q. Do you recall whether consideration was given to locating the Penn-Olin facility at Chattanooga on the property where the chlorine plant was to be built?

A. I do not believe that the chlorine plant at Chattanooga was firm and that we were definitely going ahead with it at this time. Again, I am not sure.

Q. Do you recall, sir, any discussion respecting the size, the productive capacity of the Penn-Olin facility?

A. The only memory I have of that is that in Mr. Wil-

liamson's first memorandum the plant of 10,000 tons capacity showed only a nominal return; it was not large enough; and that the 25,000-ton plant was the first one that indicated a return—and at that time it was still unsatisfactory in my own opinion.

Q. In the next-to-the-last paragraph of Mr. Williamson's memorandum, the second page of Plaintiff's Hopkinson Exhibit 2, the statement is made:

> "Obviously, if we were to equate pay-out against equity capital, we would show a very very favorable picture."

[fol. 2343] Was that a basis on which Olin's calculations were made, namely, equating pay-out against equity capital?

A. No, it was not and is not. It should not be. This was an attempt frequently made by a division coming up with an unsatisfactory project to try to make it look like a good project. They become experts in the banking field and want to borrow large portions of money, assuming that you are not obligated for the repayment of that debt and think that you have only the difference in the way of equity capital, upon which you must earn the return which, of course, is not the case.

Q. Is there any difference in the answer which you have just given between loans obtained by Olin which are guaranteed by Olin and those which are obtained on an unguaranteed basis?

A. No.

Q. In the financing negotiations which Olin undertook in the early stages of the Penn-Olin venture, do you recall any mention being made of an effort to secure a loan on an unguaranteed basis?

A. No.

Q. Were you aware that Pennsalt considered an unguaranteed loan to be an important requisite of the financing [fol. 2344] of the venture?

A. No.

Mr. Barnum: Off the record, please.

(Discussion off the record.)

Q. In Olin's interpretation and application of its return-on-investment policy, will the return on investments be identical in a situation where Olin is complete owner of the plant and receives all of the profits and a situation where Olin is 50 per cent owner of the plant and receives 50 per cent of the profits.

A. There is no distinction. Our proportion of the interest in the joint venture would be proportionate to our return.

Q. Mr. Hopkinson, I would like to show you a photostat of two pages of handwritten notes which were marked in Baltimore with the stamp "Olin D-134 HOPKINSON," and ask you, sir, whether that is a copy of notes written in your own hand.

A. That's right.

Mr. Freed: Then I would like the reporter to mark these notes as Plaintiff's Hopkinson Exhibit 3.

(Copy of handwritten notes above referred to marked Plaintiff's (Hopkinson) Exhibit 3 for identification.)

[fol. 2345] Q. Mr. Hopkinson, from your examination of these notes, were they made on February 10, 1960, as far as you can recall?

A. I see a notation up at the date. It is somebody's handwriting, not mine: "2/10/60."

Q. Do you have any recollection when these notes were made?

A. Yes, I remember that I did this to take out of the calculations that were supplied to me the interest and other extraneous matter that had been injected by the division in trying to show the pay-outs for these plants.

Q. What do you mean by "taking out the interest"?

A. Well, as I remember it, when these calculations first came to us, they had assumed that a portion of the funds would be borrowed. They also had very elaborate calculations by years, as I remember, and to simplify the problem I worked these out on a completed plant operating at full capacity, using the figures that had been supplied to me by the division on the sales and the cost of the plant, the production costs.

[fol. 2346] Q. What was the effect of taking these factors out?

A. Both projects would appear unsatisfactory. The 10,000-ton-per-year plant is obviously only a nominal return. The 25,000-ton-a-year plant is a low return by any standards.

Q. And the low return to which you are referring is the 8.3 figure in the lower right-hand corner?

A. That is correct.

Q. After making these calculations, what action, if any, did you take with respect to the Pennsalt-Olin meeting which was then scheduled for February 11, 1960?

A. I am sure I commented that the yields were unsatisfactory and that we would have to have more accurate figures or better figures before the plant would be—before the venture would be a satisfactory undertaking.

* * * * * * *

[fol. 2347] Mr. Freed: I would like the reporter to mark as Plaintiff's Hopkinson Exhibit 4 a memorandum of three pages from Mr. L. S. Howe to Mr. Hopkinson dated February 18, 1960.

(Three-page memorandum above referred to marked Plaintiff's (Hopkinson) Exhibit 4 for identification.)

Q. Mr. Hopkinson, could you tell us the circumstances which led to the submission of this document to you and any action which was taken as a result of it?

A. Yes. I received the report of Mr. Statz, referred to here, and turned it over to my assistant, Lou Howe, who was a chemical engineer specializing in the economic evaluations of processes, projects, and asked him for a review, and this is his report to me on the subject.

Q. What did you do on the basis of this report?

A. Well, this report substantiates everything I have been [fol. 2348] telling you so far and my own view on the profitability or lack of profitability of a sodium chlorate plant, and I am sure at the next meeting where this subject was brought up I again pointed out that we would have to have a more accurate and detailed analysis before I would recommend that our company put money into the project.

Q. And whose suggestions were the capacities of 10,000 tons, 20,000 tons and 25,000 tons per year used in this study?

A. I don't know.

Mr. Freed: I would like the reporter to mark as Plaintiff's Hopkinson Exhibit 5 a memorandum dated March 8, 1960, to Mr. Hopkinson from H. J. Reed.

(Memorandum above referred to marked Plaintiff's (Hopkinson) Exhibit 5 for identification.)

Q. What was Mr. Reed's position, sir?

A. He was in charge of engineering, vice president for engineering, for the corporation, and on the formation of the capital appropriation request committee, he was made chairman of it.

Q. Do you know what Mr. Reed meant in paragraph numbered 3 by a "battery limits plant"?

[fol. 2349] A. Yes. He means, by "battery limits," a plant confined to the actual production facilities of the product, in this case sodium chlorate, which plant would not include service facilities and utilities, power supply and all the other extraneous appendages that have to be added to a plant if located out in a brand new location.

Q. Do Mr. Reed's comments in paragraph 3 mean that up to this point the economic calculations had not been on the basis of a battery limits plant grafted onto an existing installation?

A. I believe he is pointing out that because of the low rate of return, it may be that the figures for capital investment have included the usual facilities and utilities, roads and so forth, that would have to be added, and that we might find that the capital investment would be less if it were purely a battery limits plant, but, as he says here, he doesn't know.

Q. Was anything done with respect to this recommendation?

A. Oh, yes. A number of things were done, but the result of all the investigations that we made was that the capital was not less than that indicated but approximately the same [fol. 2350] or more.

Q. The capital for a battery limits plant was the same or more than——

A. The figures that had already been submitted to us.

Q. I am a little puzzled by your answer, sir. What do you mean, if you can explain it?

A. I mean that we found that the estimated capital required for the facilities, as previous to this—as presented

previous to this statement here, were in fact done properly and should have been included as capital required for the plant.

Q. And those estimates were based on an entire installation, or were they based on a grafting project?

A. A grafted plant.

Q. That is the way the estimates were made and that was proper; is that what you mean?

A. Yes; but that does not mean that it was confined entirely to a battery limits plant. In a venture of this type, you must add to your battery limits plant its fair share of any facilities that it requires, even though it is grafted on another plant.

Q. And had those calculations been incorporated?

[fol. 2351] A. Yes.

Q. They had?

A. Yes.

Q. Item 6 in Hopkinson Exhibit 5 refers to a possibility of adding "a related product to the projection order to sweeten up the economics a bit."

Was any consideration given to that possibility?

A. Any consideration would have been done by the division, who made this original statement. The obvious material would be ammonium chlorate—perchlorate, and I don't remember that this was added or was ever a part of the project.

Q. Do you recall that perchlorates were mentioned at the time of the joint venture agreement and the incorporation of Penn-Olin as a possible future product of Penn-Olin facility?

A. I don't recall.

Mr. Freed: I would like the reporter to mark as Plaintiff's Hopkinson Exhibit 6 a memorandum from Mr. Hopkinson to Mr. Osborne dated March 9, 1960.

(Memorandum above referred to marked Plaintiff's (Hopkinson) Exhibit 6 for identification.)

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[fol. 2352] Q. Could you identify for us, sir, the other members of the committee? We already know that Mr. Block was head of the Chemicals Division and Mr. Otter-

strom was the comptroller, but who were Mr. Drummond and Mr. Williams at this time?

A. Mr. Drummond was vice president for marketing, and Mr. Williams was vice president for engineering, at the corporate level in both cases.

Q. And who was Mr. Sanderford?

A. He is in the accounting division and was the representative of our comptroller in many of these evaluations of new projects.

. . . . . .

[fol. 2353] Q. Mr. Hopkinson, can you tell us, if you know, why the chairmanship of the evaluation committee was given to you instead of to someone who had been more closely familiar with the negotiations and the background of the Pennsalt contract?

A. I think that's very clear. My responsibilities were those of checks and balances on the divisional operations, particularly chemical. To have handed the chairmanship of an evaluation committee to the Chemical Division, or any member of it, would be like appointing a biased judge.

. . . . . .

[fol. 2354] Q. Mr. Hopkinson, I show you the full Whither Report from which the extracts in Plaintiff's Exhibit 8 were made and direct your attention to page I-20. The last column of that page, I believe, is entitled "Penn-Olin So-[fol. 2355] dium Chlorate Plant."

I ask you if you can recall the considerations which the corporate staff committee, of which you were a member, gave to this Whither Report with respect to the Penn-Olin project in July, 1960.

A. We recommended it be turned down.

Q. And can you tell us why?

A. Unsatisfactory rate of return.

Q. And are you referring here to the 9.3 per cent figure?

A. Yes.

Q. Can you tell us what action the committee took at the time it turned down this project?

A. It just recommended to Mr. Osborne that we turn it down.

Q. And what happened then?

A. The Chemicals Division asked for a rehearing, as I remember it.

Q. And was that rehearing granted?

A. Yes.

Q. And what happened?

A. It was turned down again.

Q. After the second rejection, what occurred?

A. We sent two engineers down to examine into the plant [fol. 2356] in great detail, and as a result of that they reworked the figures, found that the cells could produce more sodium chlorate than they had estimated before, and that changed the rate of return a little bit. They found that they did not need to drum the material, and that was a rather expensive facility and it cost money to do the drumming. With the elimination of those two things, they reworked these figures and came up with a return of 10.1 per cent, I believe.

Q. I would like to show you, Mr. Hopkinson, a document entitled "Penn-Olin Chemical Company Capital Appropriations Request, Sodium Chlorate Plant, Calvert City, Kentucky, Revised August 29, 1960."

This document has previously been identified as Plaintiff's Wood Exhibit No. 3.

I ask you whether that is the document in which the revised estimates on sodium chlorate, to which you referred, was presented to the corporate staff or to the capital appropriations committee?

A. I believe it was.

Q. And does your examination of that report enable you to indicate any other factors, apart from the ones you have already testified to, respecting the reasons for reversal of [fol. 2357] the decision with respect to the Penn-Olin venture?

A. No.

* * * * * * *

Mr. Freed: I would like the reporter to mark Plaintiff's Hopkinson Exhibit 9, a memorandum from R. L. Dietrich to "Permanent Members of CAR Committee," dated July 28, 1960.

(Memorandum above referred to marked Plaintiff's (Hopkinson) Exhibit 9 for identification.)

Q. Sir, I show you Plaintiff's Exhibit 9 and ask if you can recall receiving a copy of those draft minutes of a capital appropriations committee meeting held on July 27, 1960. I might add for the record that the red lines which appear on that exhibit were placed on that by counsel for the government, and at the time this document is later used we would hope to secure a copy that does not have extraneous markings.

A. Yes.

Q. Were you present at the capital appropriations committee meeting that discussed this subject, sir?

[fol. 2358] A. Yes.

Q. Item 4 of these draft minutes states that "Sodium chlorate is in surplus and substantial quantities have been offered to us. There appears to be no incentive for other producers to go into the business at this time."

Can you enlighten us as to the information concerning the surplus condition of sodium chlorate in July, 1960, and also with reference to the offer of substantial quantities of sodium chlorate which had been made to Olin according to these minutes?

A. On the first point, the surplus production was merely obtained by adding the productive capacity of all the plants in the United States, and that was in excess of the total quantity of sodium chlorate actually made and consumed, but this takes no recognition of location of plants. It is uneconomical to move sodium chlorate or any other chemical very long distances.

On the second point, I have no knowledge about the availability of quantities made to us.

Q. Do you recall whether any representative of the Chemicals Division was present at this CAR committee discussion? In other words——

[fol. 2359] A. I don't know——

Q. ——what was the source of the information here about surplus and about substantial quantities?

A. Well, that was contained in the information obtained from the Chemicals Division.

Q. Was that information transmitted in a written report?

A. I don't know.

Q. Paragraph No. 5 in these minutes states:

"There has been little doubt that the product could be sold. We would gain very little business in other products by having sodium chlorate available."

With respect to that latter sentence, can you tell us the reasons why the minutes reflect the feeling that Olin would gain very little business in other products by having sodium chlorate available?

A. Well, I assume that they are referring to the fact that pulp and paper customers use other chemicals of ours besides sodium chlorate and might give us orders for carload shipments which might include all of the products that they will use. I don't see any other explanation of it.

Q. This sentence reads:

[fol. 2360] "We would gain very little business in other products by having sodium chlorate available."

Was there a feeling that the availability of sodium chlorate would have an influence on a customer's, or a potential customer's, desire to buy, depending on whether or not that customer bought other products?

A. Well, I think I just explained it. If he was a small customer and wanted a carload or small quantity of chlorate and other chemicals, he might want to combine his order.

Q. Paragraph 5 of these minutes contains this sentence:

"We would probably even lose some caustic business by the use of trade relations to sell chlorate."

Can you recall the discussion that is reflected by these minutes?

A. No, but a customer might easily say to one of our salesmen who try to sell him chlorate, "Well, I now buy so much caustic from you and I am not going to increase my purchases from you by buying chlorate in addition, so if you want me to buy chlorate, I am going to reduce the quantity of caustic soda I buy from you."

[fol. 2361] Q. Can you recall whether this possible loss of other business was referred to in any report to the capital appropriations committee by the Chemicals division?

A. No, and I don't think we took it very seriously either.

Q. Who brought up this possible loss of business?

A. I don't know.

Q. Paragraph 6 of this exhibit states as follows:

> "The profit margin on chlorate is so low that it can only be produced as an adjunct of a chlorine-caustic plant in the Va. area. If at a future date, prospects look better, we can build a chlorate plant tied to the proposed chlorine-caustic plant in the Chattanooga area. This would have freight and operating advantages over the Calvert City location."

Can you recall any of the discussions which are reflected by the paragraph I have just quoted?

A. Well, I would not be a party to that thinking anyhow because to build a plant ourselves, as I have said many times today, would just be beyond our competence, so that there was no opportunity of attaching a chlorate plant to a poten-
[fol. 2362] tial Chattanooga chlorine facility, by my way of thinking.

. . . . . .

[fol. 2363] Q. Can you tell us why the Penn-Olin venture was ultimately given the go ahead, even though its return on investment was only 10 per cent?

A. Well, I think it met the criterion of the—what I just explained before, a 10 per cent return on a venture in which we combined the sales knowledge and production knowledge.

Q. But wasn't that the same venture that Mr. Reed was referring to here?

A. Yes. Ideally it should have been 12 per cent. Your 10 per cent you can regard as a minimum.

. . . . . .

[fol. 2364] Q. I believe the two factors that I mentioned were the factors that were brought to the attention of the CAR committee in the August 29th capital appropriation report which you had before you. Now, were the factors that I mentioned and the increase in the return on the investment that resulted from that the sole reasons that led the capital

appropriations committee to make a reversal of its own recommendation in respect to the Penn-Olin plant?

A. So far as I know.

Q. Did that decision of the capital appropriations committee give a go ahead to the project, or were there other steps that followed?

A. Oh, the project had to be authorized. I don't know how far up in the corporation it has to go for a project of this size, but I don't think that even the president has the authority to go ahead with a project this size without consult-
[fol. 2365] ing with either the executive committee or the directors.

Q. So that following your deliberations as part of the capital appropriations committee, the recommendation of your committee went farther along in the corporate flow of business before it was approved; is that correct?

A. Yes.

. . . . . .

[fol. 2366] Q. Mr. Hopkinson, the August 29, 1960, capital appropriation request, which contained the 10.1 per cent return-on-investment figure, led the committee to approve the project. I would like to direct your attention, sir, for comparison purposes with the capital appropriations committee report, to page 51 of the 1959 Whither report, which page is a revision dated October, 1959, and ask you to tell us what the return on investment for sodium chlorate plant by Olin at Chattanooga was predicted as?

[fol. 2367] A. It is stated here as 13.1 per cent.

Q. Can you tell us, sir, why that return on investment calculated in the October, 1959, Whither Report was not satisfactory in terms of the investment policy criteria which you outlined for us earlier in your deposition today?

A. It would have been if it had—if the figure had been believed.

Q. And were there any facts known to you at the time that figure first came to your attention that led you to disbelieve it?

A. Yes, the capital investment was far too low. I therefore doubted the validity of the whole calculation.

Q. Do you recall whether these calculations were specifically reviewed by any group of which you were a member?

I believe you testified earlier that you had no recollection of a meeting in October.

A. No, I have no recollection of a meeting, and this is a Whither Report in which the divisions are not held to any specific rate of return because there is nothing to be approved or disapproved, excepting their general, overall plan [fol. 2368] for going ahead.

Q. Do you recall when the 13.1 per cent figure first came to your attention and consideration?

A. No, I don't.

Q. Can you recall whether you were aware of it at the time you began to consider the Penn-Olin project?

A. I don't believe I was. I was aware of my own previous figures on the same type of plant, which were considerably different than the 13.1 and considerably lower.

Q. To which figures are you referring, sir?

A. To the figures that had been developed previously, ever since 1956, concerning the profitability of sodium chlorate.

Q. Did you at any time undertake a study of the basis on which these particular figures in the October, 1959, version of the Whither Report, coming as they did after a series of projections and revisions of the sodium chlorate project, were based?

A. No, I did not.

* * * * * * *

[fol. 2369] Q. In light of the policy with respect to joint ventures, which you testified to earlier, the desire on the part of yourself, at least, that Olin enter a business on its own rather than as a joint venture, if that were possible, can you tell us why a detailed study for the purpose of verifying or contradicting the 13.1 per cent return-on-investment figure in the 1959 Whither Report was not conducted?

A. Well, to check up on all the figures that are presented here would require more man hours than certainly I had at my command. This one was one that was obviously and definitely out of place, and at this particular time I am not

aware that the project was in the state where a capital appropriation request was to be presented. Therefore, it was not one of the most urgent projects for investigation.

Q. At the time that you undertook consideration of the [fol. 2370] Penn-Olin sodium chlorate project, was the possibility of Olin's own entry into that business independently then a matter of urgency to consider?

A. Yes, but there would be no difference in the return of whether we did it jointly with Pennsalt or whether we did it on our own. The plant would be the same. It would have the same utilities and adjacent facilities if it were put by our chlorine plants or whether it were put by Pennsalt's plants, so you would expect the same capital investments would be there; it would be making the same product, the rate of return would be the same. The question in my mind was merely one, or would be merely one of have we got the technical know-how to produce this material or have we not, and, as I told you, I do not believe that we did have, and I do not believe we now have the capabilities of producing sodium sulphate—chlorate and that Pennsalt had. Therefore, a joint venture with Pennsalt is the only way in which we could go ahead.

Q. To your knowledge, did anyone in the company request verification of the 13.1 per cent figure which is contained before you in the 1959 Whither Report prior to the [fol. 2371] decision to proceed with the Penn-Olin venture in the early part of 1960?

A. I don't remember that such a thing was brought up but I am sure that if it were taken seriously, it would be immediately questioned by anyone looking at it.

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[fol. 2372] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 410

Baltimore, Maryland

EXCERPTS FROM DEPOSITION OF JAMES G. JOHNS TAKEN ON JULY 27, 1961 AND SEPTEMBER 8, 1961.

* * * * * * *

[fol. 2373] JAMES G. JOHNS a witness of lawful age, having been first duly sworn by the notary, was examined and testified as follows:

Direct examination.

By Mr. Freed:

Q. Mr. Johns, will you state your name and address for the record, please?

A. James G. Johns, 3900 St. Paul Street, Baltimore 18, Maryland.

Q. Are you presently the General Sales Manager of the Chemicals Division of Olin?

A. As of a week ago, my title was changed to Director of Marketing, Industrial Chemicals. This is nominal rather [fol. 2374] than an actual change, as of this moment.

Q. How long have you been employed by Olin or its predecessor company?

A. I was first employed by Mathieson Alkali, a predecessor of Olin, approximately January, 1941.

Q. And what was your starting position with the Company?

A. My initial responsibility was Sales Correspondent, Technical Sales Correspondent. That was the designation.

Q. And what did that job consist of briefly?

A. Principally replying to customers' inquiries mostly of a technical nature.

Q. When in your tenure with Mathieson did you first become associated with the selling operation?

A. I would say that initially, I was associated with the selling operation.

Q. And have you at all times since 1941 been affiliated with Mathieson or Olin Mathieson as a salesman or in the selling branch?

A. Yes.

Q. Could you give us a quick run-down of your subse-
[fol. 2375] quent titles or duties between 1941 and today?

A. Sales Representative. District Sales Manager in several capacities and locations. Manager of the then Resale Department. Field Sales Supervisor. Assistant Field Sales Manager. General Sales Manager, and my present title, to the best of my recollection.

* * * * * * *

[fol. 2376] Q. My question, sir, is designed to have you explain to us ingredients about some freight costs which you have already mentioned that went into a successful sales solicitation or sales promotion effort.

A. For many years these bulk chemicals, which are essentially raw materials to the industries consuming them, have been supplied to them, have been purchased by them on an annual contract basis. This means, by and large, that you are not competing for single orders but instead for a long term sales relationship with that consumer. I would think that the important considerations were quality of the material with respect to the requirement, reliability of the supplier in respect to on-time shipments, delivery of shipments [fol. 2377] when required because of the huge expense of a nondelivery to a processing industry, the customers own estimates of the suppliers' technical, production and transportation abilities, all of which affect your services to him. In general, these I believe, did outweigh and continue to outweigh pure pricing considerations.

Q. During most of the period you have described were the prices of these products substantially the same among all competing producers?

A. The period we are discussing begins 1953——

Q. Yes, sir.

A. —forward to today?

Q. Yes.

Mr. Barnum: You are talking about delivered prices, Mr. Freed?

Mr. Freed: If delivered price is the important criterion to a customer, then address your answer to delivered pricing. If there is another measure of price that was considered important in sales promotion efforts, you may alternate.

A. I would say that competition worked, the effects of [fol. 2378] competition worked to quickly adjust any advantage in delivered cost to a customer—whether it be created by the construction of a new plant, the adjustment of a freight rate structure, or the adjustment of the price by ourselves or a competitor—competition quickly worked to equalize the lowest delivered cost at which that consumer could receive materials in comparable quantities and qualities. Otherwise, ignoring this would raise an important consideration in the customer's mind about the supplier concerned.

. . . . . .

[fol. 2379] Q. Excuse me, I was referring to the memorandum of December 10, 1959 from you to Mr. McMullen which is marked Olin C 360a and my question is directed to the relationship between the amount of tonnage which would be available in 1960 to the two different amounts of sodium chlorate mentioned in Mr. Logan's memorandum to you.

In order that the record may be clear, Mr. Logan's memorandum to you in November indicated that 5000 tons of sodium chlorate might be available for resale by Olin in 1960, if a joint venture were to proceed but if the venture would not proceed then the smaller amount of 2000 to 2500 tons would be available. Do these two documents together in any way refresh your recollection as to the reasons why the lower tonnage limits were imposed?

A. I believe, Mr. Logan's memorandum of November 18th actually imposes the 2500 ton limit on me since he closes it by saying in all probability we will not proceed with a joint venture. I would interpret that as indicating I should not commit beyond 2500 tons.

[fol. 2380] Q. Then as you understood the situation at the time you gave the instructions to Mr. McMullen the probabilities were there would not be a joint venture, is that correct, sir?

A. Mr. Logan makes that statement to me.

Q. And was that the understanding on which you gave the instructions to Mr. McMullen or do you have no recollection about it from what is reflected in the documents?

A. My best recollection is that before issuing final instructions to Mr. McMullen here because contracts as you see were in process I advised Mr. Logan verbally that I was proceeding on the basis of the 2500 ton estimate and received his concurrence. I did not, however, ask him for an explanation.

. . . . . .

[fol. 2381] Q. Do you know, sir, who your counterpart in the Pennsalt organization is today?

A. No, I don't. I don't know if Pennsalt has an exact counterpart. I am not familiar with their organizational lines.

Q. Have you had occasion at any time during the year 1961 to discuss the marketing of any of the products under your supervision with anyone in Pennsalt?

A. I don't recollect any such occasion.

Q. Do you recall when the last meeting of the Board of Directors of Penn-Olin Chemical Company was held?

A. Do I recall the date?

Q. The approximate date, if you know.

A. No, I do not at the moment.

Q. I believe the record will show, at least insofar as [fol. 2382] reflected by the documents produced by the Defendants that there was a meeting of the Board of Penn-Olin in October 1960. Directing your attention to the period since that date, have there been any meetings at which you have been a participant at which persons responsible for the sale of chemical products in Pennsalt and in Olin have met?

A. The date was October 1960?

Q. I believe that's correct, sir. I believe the date is October 1960.

A. Unless there is a subsequent meeting of the Board of Directors, my recollection is that is the last occasion of meeting with those people.

Q. Would you read back the last few words of the answer?

(The answer referred to above was read by the reporter.)

Q. Then, to the best of your knowledge, not since the last recorded Board Meeting of Penn-Olin have you had occasion to meet with or talk with Mr. Clem or Mr. McWhirter, is that correct, sir?

[fol. 2383] A. I cannot recall a meeting with either of those gentlemen subsequent to the last Board Meeting.

Q. Can you recall since the formation of Penn-Olin Chemical Company any discussion at which you have been a party at which the problems of selling sodium chlorate have been discussed?

A. Dating from the formation of Penn-Olin?

Q. Yes, sir.

A. There was previous testimony with reference to a sales committee meeting, minutes were taken at that meeting, I do not recall that there were discussions there pertaining to the sale of sodium chlorate. My recollection is, we discussed purchase—the necessity to purchase sodium chlorate.

. . . . . .

[fol. 2384] Q. Has there been any change, to your knowledge, in the prospects for the total amount of consumption of sodium chlorate at Niagara Falls that would be greater than the amount stated under the column, Olin Mathieson Participation in this document?

A. Any change at our work would probably be for some-

[fol. 2385] what less consumption due to intense competition from imported materials.

Q. Competition in the sale of what product, sir?

A. Imported sodium chlorite.

Q. Is sodium chlorite a chemical which falls under your marketing responsibility?

A. Yes, sir.

Q. And could you describe for us the competition which Olin has recently encountered in the sale of sodium chlorite?

A. Over the past five or six years there have been increasing quantities of sodium chlorite principally from West German sources entering the country and being offered at substantially reduced prices, prices substantially below the domestic market. The distribution of these materials has moved steadily inland from the seaboards over this period of time.

Q. Can you give us any idea of the magnitude of sodium chlorite sales in the United States at the present time?

A. I would estimate they are less than five or six thou-[fol. 2386] sand tons per annum.

Q. And are there any other domestic producers of sodium chlorite apart from Olin?

A. Not at the present time.

Q. And approximately what portion of the total domestic production of sodium chlorite is supplied by Olin?

A. This is a very difficult figure to estimate because of the number of avenues through which imported materials comes in and the number of avenues by which it finds its way into the market. I would estimate we have somewhere between 40-50-55% of the market.

Q. Is Olin's production of sodium chlorite on the decline at the moment?

A. Its production and sales, yes.

Q. Can you tell us whether the sodium chlorite market on the whole is a disappearing market or a growing market?

A. As of this moment, I would estimate it could be characterized as a static market.

Q. Do you have any opinions as to the prospects of this [fol. 2387] market?

A. Unless technology developments come along to change it, I would estimate that over the next four or five years, it looks as if it will continue to be fairly static.

* * * * * * *

[fol. 2388] Q. Turn your attention back prior to the time when Calvert City and Chattanooga were viewed as alternative sites for a sodium chlorate facility, did you, during that earlier period make any studies on behalf of Olin respecting the marketing qualities or attributes of Chattanooga as a prospective site for an Olin Mathieson Plant?

A. I do not recall any specific studies. Please remember that Chattanooga was primarily the site of an electrolytic plant representing a much greater investment for us and that the chlorate consideration in connection with Chattanooga was secondary to the electrolytic plant.

Q. Did you have any discussions during this earlier period respecting the location or possible location of a chlor-alkali plant at or near Chattanooga?

A. Yes, we did.

Q. And can you tell us what discussions you had and what the substance of those discussions was.

A. This represented a $13,000,000 investment. There were considerable and voluminous discussions with reference to the plant. As I recall the factors that were decisive were: its location with other producing points, [fol. 2389] its location on inland waterway, and the availability of power in the quantities and at a cost that was attractive to the producer.

Q. In the discussions you had concerning a chlor-alkali plant, were both Chattanooga and Charleston, Tennessee, considered simultaneously?

A. Let me clarify the term Chattanooga as I have been using it. I have used the term Chattanooga to refer to that general area of the Tennessee River in the vicinity of Chattanooga. Charleston is some forty road miles north of Chattanooga.

Q. But, for present purposes, Chattanooga and Charleston are interchangeable for the purpose of your testimony, is that correct, sir?

A. That's right.

Q. At any time during your voluminous discussions and considerations of the location of a chlor-alkali plant at Chattanooga, was the subject of sodium chlorate plant in conjunction with the chlor-alkali plant discussed?

A. Yes, this possibility was discussed, always, according to my recollection, as a secondary consideration.

[fol. 2390] Q. And can you recall when the discussion of this possibility took place and who participated in the discussion.

A. This would have been discussed primarily with Mr. Logan, to a lesser extent with Mr. Wood, our Project Engineers for electrochemical plants, and to some extent with our transportation people who would develop transportation data pertinent to the location of the plant.

Q. And can you recall for us the substance of the discussion which you had with respect to this point namely with the possible association or relation between a chlor-alkali plant and a sodium chlorate plant in the Charleston-Chattanooga area?

A. Basically, it was felt a location in this general area

favorable to a chlor-alkali plant would not be unfavorable to a sodium chlorate plant since both facilities are heavy power consumers and both facilities depend on salt as their raw material. Therefore, it was natural to give them consideration together.

Q. And were any conclusions reached prior to the commencement of the Penn-Olin negotiations respecting [fol. 2391] construction of a sodium chlorate plant at Charleston-Chattanooga?

A. No, as a matter of fact, I would say that the consideration that was given the matter was rather that the site not be a site that would not lend itself to the production of sodium chlorate should that decision be made.

Mr. Freed: Would you read back the witness' last answer, please?

The Witness: I think you had better.

(The answer referred to above was read by the reporter.)

A. What I am attempting to say is that the site not rule out the possibility of locating a sodium chlorate facility there should it become later desirable to do so.

Q. And when was the last time that subject of the sodium chlorate plant in conjunction with the chlor-alkali plant at Charleston-Chattanooga was discussed, to your knowledge?

A. The most recent discussion?

[fol. 2392] Q. Yes, sir.

A. I can't recollect any specific instance that I would characterize as the most recent discussion on that subject.

Q. Were you ever present during the discussions of this matter with Mr. Block?

A. At marketing committee meetings when brief reports of progress on the matter were conveyed to Mr. Block, I would have been there.

Q. From the testimony which has already been given in this deposition and others, Mr. Johns, and from the evidence, which exhibits have been made available, I believe the record shows that a sodium chlorate plant in conjunction with a chlor-alkali plant was projected at Chattanooga in October 1959, in the Whither Report and that towards the end of December, 1959, conversations were initiated between Mr. Block and people in the Pennsalt organization looking toward a joint facility.

I make this statement for the purpose of asking you whether apart from the matters which you have already testified today, you have any information that would il- [fol. 2393] luminate the record as to why Olin made the decision, if it did make the decision, to look toward a joint facility at the end of 1959 after projecting the facilities I have just mentioned as independent ventures in October of 1959.

A. I did not participate in any of the discussions with Pennsalt looking toward this venture. From time to time, I was asked to make certain marketing estimates which had a bearing on the matter. It was subsequently my understanding that Pennsalt know-how, Pennsalt's experience in the production of sodium chlorate were factors which outweighed the marketing considerations which I brought up and these were not brought up as major deterrents to successfully marketing the product. This, I believe, was a primary consideration in a decision to go with Pennsalt on a joint venture.

. . . . . .

[fol. 2394] Q. Have you encountered any situations which you can now recall and when I say you, I mean the selling organization of your Chemicals Division in which a customer or prospective customer of Olin sought to sell Olin products in return for purchasing Olin products.

A. Where a customer sought to sell our products?

Q. To sell to Olin.

A. Oh, I beg your pardon.

Q. Products in order as a quid pro quo perhaps to [fol. 2395] purchase products from Olin.

A. This might come up in a situation where we were consistently pressing for additional consideration on one of our products and where there might be an indication that the customer likewise would like to do more business with us.

Q. And what is Olin's response in situations of that kind?

A. As a marketing organization, we are very severely limited in these situations. It is the policy of the corporation not to use the corporation's purchases for marketing purposes. This, first of all, defeats your marketing objec-

tives because it has a tendency to limit your sales to the exchange of purchases for purchase. Secondly, it defeats good purchasing practices.

Q. You refer to corporate policy. For how long has this been a corporate policy?

A. I cannot recall the time in my career in selling with Olin that the sales people had ready access to purchase information either. Nor can I ever recall the time when Olin sales personnel, Chemicals Division sales [fol. 2396] personnel, with which I am most familiar, were encouraged or even permitted to use this as a selling tool.

* * * * * * *

[fol. 2397] Q. Are salesmen in the Chemical Division made aware or permitted to be aware of the identity of those prospective customers who happen to be major suppliers of Olin Mathieson Chemical Corporation?

A. You mean are they systematically made aware of those people among the group that they call on who are large suppliers of Olin Mathieson.

Q. Systematically or otherwise?

A. No.

Q. Can any salesman who wishes to increase his own sales secure information regarding purchases by the corporation from various prospective customers?

A. Can he secure information from customers?

[fol. 2398] Q. Can he secure information within Olin about Olin's purchases from these prospective customers?

A. No, he very definitely cannot and all of our salesmen are quite aware that it isn't our policy to use our purchases for selling purposes. They are well instructed, I believe, that they should initiate no discussions in this direction.

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[fol. 2399] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 411

Baltimore, Maryland

EXCERPTS FROM DEPOSITION OF WALTER W. NORTHGRAVES
TAKEN ON JULY 18, 1961

* * * * * * *

[fol. 2400] WALTER W. NORTHGRAVES, a witness of lawful age, having been first duly sworn by the notary, was examined and testified as follows:

Direct examination.

By Mr. Freed:

Q. Sir, would you state your name and address for the record?

[fol. 2401] A. Walter W. Northgraves, 7504 Rocksham Drive, Towson 4, Maryland.

Q. And would you state your present employment, sir?

A. I am an employee of Olin Mathieson Chemical Corporation.

Q. And how long have you been an employee?

A. Twenty-two years.

Q. What is your present position with Olin?

A. We are in the midst of a reorganization and my present position has not been defined.

Q. What was your position prior to the reorganization?

A. I was manager of the Market Development, heavy chemicals.

Q. And from when to when did you hold that job?

A. For the past year, almost a year.

Q. At the time of this deposition today, you do not hold the title of Manager, Market Development, or is some other fact——

A. I have not been informed that I no longer hold the title, but the framework of the organization under which this position existed has been changed.

[fol. 2402] Q. Prior to holding the managership of Market Development, what was your employment with Olin?

A. Market Development Representative.

Q. And the period of time in which you were a representative?

A. Approximately four years.

Q. Is it correct then that you became Market Development Representative around 1956?

A. Approximately, yes.

• • • • • • • •

[fol. 2403] Q. In 1954, when you first began to work with the pulp and paper companies on chlorine dioxide generation, was Solvay already an established competitor in this field?

A. Yes.

Q. Was it part of your job to promote the adoption of Mathieson process generators over the installation of Solvay systems?

A. It was my responsibility to convey to our customers, or to the mills who were interested in chlorine dioxide, a detailed description of the principles of our process, the equipment required for its operation, the manner of operating the equipment, and briefly to instruct them thoroughly in all aspects of the process.

Solvay of course has done the same thing and the mill would then make up its mind, based on the evidence presented by Solvay and ourselves, as to which process they thought would best suit their particular requirements.

[fol. 2404] Q. Would you describe for us in language that the court would be able to understand, the difference in the two systems?

A. The principal difference and perhaps the only significant difference, is that we, that is to say, Mathieson, use sulphur dioxide as the reducing agent, whereas Solvay uses methanol.

For technical reasons, into which we need not go, the use of methanol requires twice as much sulphuric acid as the use of SO_2.

There are some differences in reaction equipment but these are usually not considered significant.

Q. What are the advantages of the Olin process over the Solvay process as you may have had occasion to point out to a customer or to a pulp and paper company?

A. The cost of chlorine dioxide from the Mathieson process is usually less than that from the Solvay process, in our opinion.

Q. Can you describe for us the difference in cost?

A. There are many factors which bear upon this. [fol. 2405] The delivered cost of sulphuric acid and methanol, and sulphur dioxide, varies from location to location.

A very significant factor also would be whether the mill would purchase sulphur dioxide or manufacture it themselves from sulphur.

In the latter case, there is a significant difference in favor of the Mathieson process.

Q. And is this the factor which has been instrumental in the Mathieson process' success, namely, that the customer has been willing to manufacture its own sulphur dioxide for use in the process?

A. No, not—certainly not in every case. In the past two or three years there have been a number of installations of the Mathieson process which used purchased sulphur dioxide.

Q. Expressed in terms of dollars, what is the typical cost advantage to a company in installing the Olin process over that of Solvay, in your opinion?

A. As I stated before, it varies widely and the difference might vary from essentially nothing to as much as thirty [fol. 2406] or forty dollars per day, per ton of chlorine dioxide manufactured.

Q. Is there any difference in the quality of bleaching from either process?

A. Not in my opinion or I believe in the opinion of anyone else.

Q. Is there any difference in the ease of operation?

A. This is a controversial area. We think ours is easier and Solvay thinks theirs is easier and opinion varies throughout the industry.

Q. In the effort which you exert on behalf of Olin, what do you tell the customer or the paper company are the

principal advantages of the Mathieson process over the Solvay process?

A. The principal advantages are economic.

Q. That it is cheaper to operate?

A. Yes.

Q. How about the cost of installation, relative size of the cost of installation?

A. It is essentially the same for the two processes when purchased sulphur dioxide is used.

[fol. 2407] Q. I am sorry, sir, I thought you said before that sulphur dioxide was only used in the Mathieson process?

A. Perhaps I should clarify that by stating again that sulphur dioxide used in the Mathieson process may be purchased or manufactured at the site.

When it is purchased, the equipment required for the Mathieson process is substantially the same in cost as that required for the Solvay process. When sulphur dioxide—when the cost of sulphur dioxide manufacturing equipment is added, the total cost is of course higher.

Q. Then in terms of the economics which a pulp manufacturer must face, is it correct to say that the cost of installation will be higher if he chooses to manufacture his own sulphur dioxide, but his operating cost will be lower because he will be able to make his own sulphur dioxide rather than purchase it.

A. Yes.

[fol. 2408] Q. And as of today, as part of the Solvay and Mathieson processes are there any other methods by which pulp can achieve this degree of brightness with the other characteristics you have described?

A. Well, now, the Mathieson and Solvay processes are not directly related to the means of achieving brightness, but only the methods of manufacture of chlorine dioxide which is used to achieve the brightness.

Q. I understand that but on that premise would you——

A. There are two other processes which are in use in this country. One of them is the Day Kesting process used by Brown Company in Berlin, New Hampshire.

The second is the Rapson process.

[fol. 2409] Both use sodium chlorate. The Day Kesting process involves the manufacture of sodium chlorate in equipment which is an integral part of chlorine dioxide manufacturing equipment.

The Rapson process operates on purchased chlorate, as do the Solvay and Mathieson processes.

Q. Is the Rapson process used at all in the United States?

A. To the best of my knowledge it is now in use in three mills.

Q. Are those very recent installations?

A. This is a quite recent development, yes.

Q. Can you tell us the mills that are using the Rapson process?

A. I don't know as a certainty, but it is my general understanding that there are three mills in the south, one of which is an International Paper Mill.

This process is being operated in equipment which was originally installed for the Mathieson or the Solvay processes.

There are certain local reasons which are more or less [fol. 2410] technical in nature, which make it appear to be more economical.

Q. Did you say "local reasons," sir?

A. Yes.

Q. Does that have to do with the availability of other materials?

A. No, no, it is based upon the type of pulp operation the mill has, the type of wood that it uses, and by-product utilization.

[fol. 2411] Q. Outside of the process you have just described, there are no other methods that you know of for commercially achieving the degree of whiteness that you have described with the other characteristics of the pulp, is that correct?

A. Certainly no economical process.

* * * * * * * * *

[fol. 2412] Q. When you have made calls on pulp and paper companies, with sales representatives, where the call did not relate to technical services, what did those calls relate to?

A. I think they related to the fact that in the case of sodium chlorate, for example, this was a chemical which was new to our sales personnel, and I had specialized knowledge in that field, and that these calls were to assist our sales people in acquainting themselves with this particular chemical and the methods of handling and application, and so on.

Q. Can you recall any specific call that you made with a sales representative, to a paper company, on such a mission?

A. Yes, I can recall a number of such calls: East Texas Pulp and Paper, Crosset, and perhaps a dozen others, and if you think it is necessary, I will try to recite them. See, I embarked upon a series of calls for the express purpose of helping to educate our salesmen in this field, as I have already mentioned.

[fol. 2413] Q. When you say your purpose was to help educate the salesmen, are you saying that in your contact with the company, you made no—you did not yourself solicit any sales, but were merely there to answer questions the salesmen could not answer, or did you play a different role than the one I have just described?

A. I think it could best be characterized as a cooperative effort on the part of the salesman and myself to obtain commitments from the various mills for sodium chlorate.

Q. In the vist which you made to East Texas Pulp and Paper Company, who was the salesman who accompanied you?

A. Mr. Shoemaker.

Q. When did you and Mr. Shoemaker make this visit to East Texas?

A. To the best of my recollection, it was sometime last fall.

Q. And who was the representative of East Texas whom you visited at that time?

A. The director of traffic and purchasing, whose name was Mr. Baker, I believe, Cliff Baker.

[fol. 2414] Q. Prior to this visit, had East Texas ordered any sodium chlorate from Olin, to your knowledge?

A. I do not know whether they had ordered sodium chlorate. I believe they had expressed the possibility that they would consider doing so.

Q. And as a result of your visit with Mr. Shoemaker, did East Texas order sodium chlorate from Olin?

A. I believe they reiterated their intention of so doing and to the best of my knowledge and belief, they subsequently ordered material from us.

Q. Can you describe for us the conversation which you had with Mr. Baker during that call on East Texas?

What did you say to him?

A. Well, I believe I pointed out to him the advantages to East Texas of our entry into the sodium chlorate field.

Q. By entry into the sodium chlorate field, what did you refer to?

A. Our ability to provide or to furnish them sodium chlorate from the new Calvert City facility.

Q. Then your visit with Mr. Shoemaker was made in an effort to promote the sale of sodium chlorate from Calvert [fol. 2415] City?

A. Very definitely.

Q. In the course of your conversation with Mr. Baker, did you at any time refer to the work which you had done with his company in connection with the installation of the Mathieson process generator?

A. It was mentioned in a very casual manner, since he was certainly very well aware of the work which we had done.

Q. You referred to the benefits that you brought to Mr. Baker's attention, from the sodium chlorate business that Olin was now in. Can you describe to us what you told Mr. Baker about those benefits, what benefits to which you referred?

A. I believe I stated in substance that because of the remote location of the Pennsalt facility in Portland, Oregon and its relatively small size, it was really not a factor in the eastern and southeastern market and therefore there were only two suppliers of an essential chemical and the entry of the third supplier into the field would represent substantial advantages to the consumer.

[fol. 2416] Q. What were the advantages you suggested or pointed out to Mr. Baker?

A. Well, I think it is generally accepted that the more suppliers there are of the material, the more stable is the market likely to become, from the standpoint of the con-

sumer, and our entry into the field constituted a 50 percent increase in suppliers of this important chemical. I also pointed out that Hooker's action in stabilizing or attempting to stabilize the price for a five-year period, certainly could be attributed at least in part to the appearance of further competition in this field.

Q. Did you make any statement to Mr. Baker with respect to the likelihood that there might be price advantages or reduction that would flow to his company from the entry of Olin and Pennsalt into this field?

A. Nothing in addition to the answer I gave to your last question.

Q. Do you know who was then supplying East Texas with sodium chlorate?

A. American Potash, and Hooker.

Q. In your conversation, did you or Mr. Shoemaker, [fol. 2417] urge that his company purchase sodium chlorate from you instead of Hooker and American Potash?

A. Well, I think it is obvious that any business we received from East Texas would be at the expense of either Hooker or American Potash or both, certainly in the absence of increased consumption of this material.

Q. To the best of your knowledge, has the sodium chlorate which has now been sold to East Texas as a result of your efforts, been as the sale of a third supplier to East Texas, or have you replaced in whole either of American Potash or Hooker's former sales?

A. I am certain we are there as a third supplier.

Q. During your conversation with Mr. Baker, was any specific reference made to the new company as a third and additional supplier, as opposed to as a supplier who might replace the sodium chlorate being sold to East Texas in whole by either Hooker or American Potash?

A. Yes. I think everyone would like to have all the business, but that is quite impossible, of course.

Q. Is your expectation in any of these solicitation efforts limited to the expectation or hope that you will become a [fol. 2418] third supplier to each company that you visit?

A. Well, it may be limited—it is certainly I think limited to the expectation, but such hopes as we might have would be impossible of fulfillment.

. . . . . .

By Mr. Freed:

Q. To your knowledge was Olin, at the time of your visit to East Texas, a customer of East Texas for any product which that company was then producing?

A. Not to my knowledge.

Q. Was any reference made during the course of your conversation with Mr. Baker to the possibility of Olin purchasing any products from East Texas?

A. I cannot recall any such specific remark; no.

Q. If any such remark had been made, would you recall it, even if you cannot recall it in detail, or are you stating that there was no such conversation?

A. During the course of our contacts with the pulp [fol. 2419] and paper industry, it was very frequently brought out that Olin sells far more to the pulp and paper industry than it buys from it, and remarks of this type are frequently made more or less in passing.

Q. Remarks of what type?

A. To the effect that, as I stated, Olin sells more chemicals to the pulp and paper industry than they buy in return products of the pulp and paper industry. In other words, there is a serious imbalance in dollars, if you wish to refer to it in that manner.

Q. And when such conversations take place, what is the context in which they arise? Why are remarks of that kind relevant in your conversations with prospective sodium chlorate customers?

A. As far as I am concerned, they are not relevant at all, because they have nothing to do with buying anything.

Q. When I say relevant, how do they arise in the course of conversation, without passing judgment on their importance or significance?

A. Well, I think the hope is usually expressed in a general way, or the wish is expressed, that Olin were buying [fol. 2420] more paper or pulp.

Q. Do you recall whether any such remark was made by Mr. Baker in the course of the conversation which you and Mr. Shoemaker had with him?

A. It could well have been made but I do not recall any specific such remark.

Q. Whether or not any specific such remark were made by Mr. Baker, if it had been made, it would simply be, is it

correct to say, it would simply be typical of the kind of conversation that would arise in the typical sodium chlorate sales effort you might make?

A. Yes.

Mr. Barnum: That Mr. Baker might make?

Mr. Freed: No, that Mr. Northgraves might make or Mr. Shoemaker?

The Witness: Yes, I think it might arise in conversations relating to sodium chlorate or conversations relating to any of the chemicals which we sell to the pulp and paper industry.

By Mr. Freed:

Q. With specific reference to sodium chlorate sales ef-
[fol. 2421] forts or missions in which you have been engaged, can you recall any specific case in which a representative of a pulp or paper company brought up the subject of Olin's purchases, past or prospective, of products of that company?

A. I cannot recall a specific instance but I must reiterate that it is something which does come up frequently in a more or less general way.

Q. In your recollection, has any pulp or paper company ever specifically asked whether Olin would purchase products from it, in return for the company's order from Olin of sodium chlorate?

A. No.

Q. Has any such equivalent request been made in connection with the sale of any other Olin product to a pulp or paper company, that you can recall?

A. Not to my knowledge.

Q. In any of the conversations which you have had with pulp or paper companies, have you ever made any statement to a paper company with regard to the possibility of Olin's purchasing products from that company?

A. No.

[fol. 2422] Q. Have you ever been present when a representative of Olin, sales representative of Olin, has made any such statement?

A. I cannot recall any such instance.

(Recess taken.)

[fol. 2423] By Mr. Freed:

Q. The testimony which you gave before the recess with regard to East Texas covered in some detail the sales promotion effort which you and Mr. Shoemaker engaged in.

Would you say that your testimony with respect to that visit to East Texas is typical of the kind of coverage kind of sales effort, which Olin made, insofar as your visits to the dozen or so paper companies with sales representatives of Olin are concerned?

A. Yes, I think that is a fair statement.

Q. And can you tell us when you first participated in a sales visit to a pulp and paper company, in connection with sodium chlorate sales?

A. To the best of my recollection, it was last fall or possibly late last summer. I cannot recall precisely.

Q. Do you recall offering your sales assistance to Mr. Smith in New York?

A. Oh, yes.

Q. Mr. Smith is the Olin sales man in the New York area?

A. He is district sales manager there, yes.

Q. To the best of your recollection, would say he is the [fol. 2424] first of the Olin salesmen to whom you offered your assistance, or to whom you gave your assistance in selling sodium chlorate?

A. I am quite sure he was not the first.

Q. Do you recall who the first one was?

A. I cannot recall the sequence in which these calls were made. With reference to the call at East Texas, I guess the call was one of the early ones, but I have no certainty in that regard.

Q. I would like to show you a document dated October 14, 1960, from Vernon Woodside, to Mr. J. G. Johns, numbered Olin C-214 and ask you whether, to your knowledge, this was the first time, whether this document represents a starting point in the sales effort which you gave to promote sodium chlorate sales in the latter part of 1960?

A. If it was not the first, it was certainly close to the first. This was obviously the period of time in which my activities started.

Q. Were your efforts in sales promotion work on behalf of the joint company successful as you look back on them?

A. We have received commitments and orders for

[fol. 2425] chlorate from most of the mills on which I called, and certainly I would like to think that my efforts had a bearing on this, in at least some cases and to some degree.

* * * * * * *

[fol. 2426] By Mr. Freed:

Q. Are you familiar with the nature of the sales efforts made by American Potash and Hooker, in their efforts to promote the sale of sodium chlorate which they manufacture?

A. Only in the most general way, that they are reputable suppliers.

Q. In terms of the ability and knowledge and background and experience of each of those companies to engage in sodium chlorate sales, would you equate those attributes insofar as your company is concerned with that of American Potash and Hooker or would you consider that one or another of these companies has an advantage in terms of [fol. 2427] ability to sell sodium chlorate?

A. Advantage over Olin or over one another?

Q. Over one another.

A. To the extent that service is useful in selling products of this type, I would say that Hooker would have an advantage. I referred earlier to the Rapson process for manufacturing chlorine dioxide. This patent is assigned to Hooker in the United States and, therefore, as far as a potential user of this process is concerned, the Rapson process is the Hooker process.

Dr. Rapson is a world authority on matters relating to chlorine dioxide production and use, and he is consultant to Hooker and his services are made available by Hooker to the pulp and paper industry free of charge.

So I think it is right to say that Professor Rapson is a technical service man for Hooker, in matters relating to chlorine dioxide and pulp bleaching in general.

Q. Are there any services that Dr. Rapson can perform which cannot be performed by Olin and its personnel, including yourself?

A. This is a matter of opinion regarding relative de- [fol. 2428] grees of competence of different people, and

since I am one of the persons involved, I don't think I would hazard an answer to that question.

[fol. 2429]. Q. Well, Mr. Northgraves, your prior testimony was that service was not likely any longer to be necessary in connection with sodium chlorate sales, and I wonder how that testimony is consistent with your testimony just now concerning Dr. Rapson and Hooker's ability to render service.

Can you explain that for the record?

A. I believe so. I think I referred to Dr. Rapson's reputation as an authority on chlorine dioxide production, and upon the bleaching of pulp. The technology of bleaching is in, I think, a continuing state of development, and there are many differences of opinion about the best bleaching techniques to be used in a given instance, and Dr. Rapson purports to be, and I believe is, a foremost authority in this field.

Q. Are Dr. Rapson's talents in this area equally applicable to Solvay, Mathieson and Rapson process generators?

A. He has a wide knowledge of other processes than his own; yes.

Q. Insofar as you personally are concerned, do you consider that Dr. Rapson has more to offer a pulp and paper company, a prospective sodium chlorate customer, than the [fol. 2430] Olin organization can offer such a customer or prospective customer?

A. I believe that Dr. Rapson enjoys a more prominent position in the field of bleaching than myself or anyone else on our staff.

Q. Well, now, removing ourselves from the area of reputation, do you consider Olin to be second best to Hooker, when it comes to its ability to render services to the pulp and paper companies?

A. I don't think that all companies are equally competent in all areas.

Q. And in this particular area, what is your answer?

A. In the area of pulp bleaching?

Q. Yes.

A. It is my personal opinion that Dr. Rapson perhaps has a higher degree of competence than Olin presently has collectively in this field.

Q. And how about the ability of American Potash and its sales organization in the field of sodium chlorate sales and applications?

A. To the best of my knowledge, they have done no work [fol. 2431] on pulp and paper applications of sodium chlorate.

Q. Is it your belief, then, that Olin has an advantage and edge over American Potash in its ability to render services to prospective sodium chlorate customers?

A. To the extent that these services relate to the production of chlorine dioxide, I would say this is probably true.

Q. With respect to your knowledge of the Pennsalt organization and its technical proficiency, how would you rate Olin's ability as against Pennsalt's to render the kind of service which sodium chlorate customers might desire or require?

A. To the best of my knowledge, the two organizations have approximately equal degrees of competence.

Mr. Subak: When you, Mr. Northgraves, speak of the Olin technical ability, are you substantially referring to your own ability, insofar as you are referring to chlorine dioxide generation?

The Witness: To the extent that I have had more experience in this field than anyone else in our organization, I would answer yes.

[fol. 2432] By Mr. Freed:

Q. To your knowledge, Mr. Northgraves, does Dr. Rapson engage in sales promotion activities in the area of sodium chlorate?

A. Certainly the objective, Hooker's objective in retaining him and making his services available to their customers and prospective customers, is for the purpose of obtaining business, specifically, I believe, sodium chlorate business.

Q. As you understand it, is Dr. Rapson's role vis-a-vis Hooker the same as the role you have heretofore occupied vis-a-vis Olin Mathieson?

A. I would say it is roughly similar, yes.

Q. Do you consider, Mr. Northgraves, that a new company entering the sodium chlorate field for the first time

would be at a disadvantage vis-a-vis—in competition with Olin or Pennsalt or Hooker, in its ability to make sodium chlorate sales in light of the considerations about service which you have just discussed?

A. I believe that this would not be a factor because of the fact that the number of new chlorine dioxide instal- [fol. 2433] lations has decreased drastically. That is to say, there would be relatively few opportunities in the future to perform the type of service which we have been discussing.

Q. Do I understand correctly you are now saying your previous testimony concerning Dr. Rapson was a reference to Hooker's advantages and experience in the growth period of chlorine dioxide use in the pulp and paper industry, rather than a reference to Hooker's edge or ability to make sodium chlorate sales today. Is that correct?

A. That is only partly true.

You may recall that I stated that the three installations of the Rapson process which I understand to be now operating are conversions of former Mathieson and Solvay installations. Hooker claims—and it may be true—that there are other locations where it would be economically desirable to convert from the Mathieson or Solvay type of operation to the Rapson type of operation. To the extent that this is true, this would represent an area in which Hooker could profitably operate from a service standpoint where we could not.

Q. Leaving Hooker aside for the purpose of this ques- [fol. 2434] tion, would you then say that a newcomer entering the sodium chlorate field hereafter would find itself on a par in its ability to make sales of sodium chlorate, on a par with other competitors in the industry, apart from Hooker?

A. Yes, I believe this is essentially true.

Q. Is it your view, sir, that the advantage which Olin has heretofore had in its ability to aid companies in the installation of chlorine dioxide generators is no longer a material advantage in making sodium chlorate sales?

A. That is my opinion. I think it might be expressed in the question, "What have you done for us recently?" Now you cannot live on one thing forever.

Q. Assuming that Pennsalt should become a producer of sodium chlorate in the southeastern part of the United

States, do you know of any disadvantage which Pennsalt might suffer in its ability to make sodium chlorate sales in competition with the existing industry?

A. I believe their principal disadvantage would be that they were coming into a market which was being well serviced by present suppliers.

Q. Would their disadvantage in this respect be any [fol. 2435] different from any other newcomer in the industry? If any new company should now enter would it be subject to the same disadvantage?

A. I would think so.

Q. Prior to the time that Pennsalt and Olin decided to enter into the Penn-Olin sodium chlorate venture, do you know of any reason why Pennsalt would have been at a disadvantage in its ability to enter the business alone, from a sales point of view in the southeastern part of the United States?

A. I can't think of any particular disadvantage, no.

Q. Would you think that Pennsalt's ability to have entered the business alone at that time was approximately the same as Olin's ability?

A. I would say that their ability to do this would be somewhat——

Let me rephrase that by saying that any increased difficulty which they might have anticipated would be due to the fact that they did not have an existing sales organization in the south and southeast area. We have a long history of serving the pulp and paper industry in that [fol. 2436] area. They do not.

Q. But apart from the existence of a sales force which any newcomer would have to develop in this industry, you know of no other disadvantage which Pennsalt or any other new producer might have suffered in entering the business in the beginning of 1960?

A. No serious disadvantage; no.

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[fol. 2437] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 412

Civil Action No. 2282

UNITED STATES OF AMERICA, Plaintiff,

v.

PENN-OLIN CHEMICAL COMPANY, OLIN MATHIESON CHEMICAL CORPORATION AND PENNSALT CHEMICALS CORPORATION, Defendants.

Sodium Chlorate Data Stipulation

Plaintiff and defendants hereby stipulate, solely for the purpose of this case and for no other, and without waiving objections as to relevancy, that competent witnesses, if called by plaintiff or defendants, would testify that the sodium chlorate sales, production, capacity, and shipment data of American Potash and Chemical Corporation, Hooker Chemical Corporation, Pennsalt Chemicals Corporation, and Penn-Olin Chemical Company are accurately set forth in the following sodium chlorate data tables:

SC Data Table

1. Sodium Chlorate ($NaClO_3$) Sales by the Domestic Commercial Producers, 1957-1960 (Short Tons).
2. Sodium Chlorate ($NaClO_3$) Production for the Domestic Commercial Producers, 1957-1960 (Short Tons).
3. Sodium Chlorate ($NaClO_3$) Plant Production Capacity for the Domestic Commercial Producers Showing the Tonnage of All Plants and the Percentage of Each to the Total Industry (Short Tons).
4. Relationship Between Capacity, Production and Shipments of Sodium Chlorate ($NaClO_3$) for the Three Domestic Commercial Producers Each Year 1957 through 1960.
5. Production of Sodium Chlorate West of the Rockies[a] and East of the Rockies[b] by Three Domestic Commercial Producers 1959-1960 (Short Tons).

6. Production of Sodium Chlorate West of the Rockies [a] and East of the Rockies [b] by Three Domestic Commercial Producers 1957-1958 (Short Tons).

[fol. 2438] 7. Sodium Chlorate Plant Capacity for the Domestic Commercial Producers, West of the Rockies and East of the Rockies, 1961 (Short Tons).

8. Sodium Chlorate Plant Capacity for the Three Domestic Commercial Producers, West of the Rockies and East of the Rockies, 1959-1960 (Short Tons).

9. American Potash and Chemical Corporation and Hooker Chemical Corporation 1960 Sodium Chlorate Shipments by States (In Short Tons).

Daniel J. Freed, Attorney for the Plaintiff, United States of America, Wm. Potter, Attorney for the Defendant, Penn-Olin Chemical Company, Cravath, Levant & Moore, Attorney for the Defendant, Olin Mathieson Chemical Corporation, H. Francis DeLone, Attorney for the Defendant, Pennsalt Chemicals Corporation.

November 6th, 1961.

[fol. 24391]

Sodium Chlorate Data Table No. 1

Sodium Chlorate ($NaClO_3$) Sales by the Domestic Commercial Producers, 1957-1960

(Short Tons)

Producer	1960 Tons	1960 Percent of Total	1959 Tons	1959 Percent of Total	1958 Tons	1958 Percent of Total	1957 Tons	1957 Percent of Total
Hooker Chemical Corp.	37,559	45.8	33,991	48.1	29,541	50.7	22,128	47.8
American Potash & Chemical Corp.	29,173	35.6	25,655	36.3	18,629	32.0	15,872	34.2
Pennsalt Chemicals Corp.	15,195	18.6	11,067	15.6	10,052	17.3	8,332	18.0
Total For The Three Producers	81,927	100.0	70,713	100.0	58,222	100.0	46,332	100.0

Source: Sodium Chlorate Data Table No. 9.
General Stipulations (Set I, PX 414 and Set II, DX 48).

[fol. 2440]

Sodium Chlorate Data Table No. 2

Sodium Chlorate ($NaClO_3$) Production for the Domestic Commercial Producers, 1957-1960

(Short Tons)

Producer	1960 Tons	1960 Percent of U.S. Total	1959 Tons	1959 Percent of U.S. Total	1958 Tons	1958 Percent of U.S. Total	1957 Tons	1957 Percent of U.S. Total
Hooker Chemical Corp.	39,284	43.1	37,150	42.1	27,740	41.2	24,205	40.9
American Potash & Chemical Corp.	35,588	39.0	38,720	43.9	21,707	32.3	23,425	39.6
Pennsalt Chemicals Corp.	17,028	18.7	12,384	14.0	12,153	18.1	8,431	14.3
All Other Producers	—	—	[b]	—	5,649	8.4	3,081	5.2
Total U. S. Production	91,184 [a]	100.8	88,300	100.0	67,249	100.0	59,142	100.0

[a] Preliminary figure; quantity reported by the Bureau of the Census is less than the tonnage furnished the Antitrust Division, Department of Justice by the three producers.

[b] Less than 50 tons.

Sources: For the U.S. total production—Current Industrial Reports (formerly Facts For Industry) Series M 28 A Bureau of the Census, United States Department of Commerce.

Letters of November 1, 1960 and June 30, 1961 to the Antitrust Division from Ansley Wilcox, 2nd Vice-President and General Counsel, Hooker Chemical Corporation.

Letters of October 26, 1960 and July 5, 1961 to the Antitrust Division from R. B. Coons and R. J. Hefler, Vice-Presidents, American Potash and Chemical Corp.

Letter of September 14, 1960 to the Antitrust Division from Robert V. Massey, Jr. of Barnes, Dechert, Price, Myers and Rhoads, and answers to Plaintiff's Interrogatory No. 81, Set V.

[fol. 2441] Sodium Chlorate Data Table No. 3

Sodium Chlorate ($NaClO_3$) Plant Production Capacity for the Domestic Commercial Producers Showing the Tonnage of All Plants and the Percentage of Each to the Total Industry

(Short Tons)

	1961		1960		1959		1958		1957	
	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total
Hooker Chemical Corp.	46,000	33.2	50,000	46.5	41,150	44.6	33,340	46.5	29,435	45.8
Niagara Falls, N. Y.	14,000	10.1	18,000	16.8	12,000	13.0	12,000	16.7	12,000	18.7
Columbus, Miss.	32,000	23.1	32,000	29.8	29,150	31.6	21,340	29.8	17,435	27.1
American Potash and Chemical Corp.	50,500	36.5	42,000	39.1	39,000	42.2	27,000	37.7	27,000	42.0
Henderson, Nev.[a]	28,000	20.2	27,000	25.1	27,000	29.2	27,000	37.7	27,000	42.0
Aberdeen, Miss.	22,500	16.3	15,000[b]	14.0	12,000	13.0	—	—	—	—
Pennsalt Chemicals Corp.	15,434	11.1	15,434	14.4	12,212	13.2	11,367	15.9	7,848	12.2
Portland, Ore.	15,434	11.1	15,434	14.4	12,212	13.2	11,367	15.9	7,848	12.2
Penn-Olin Chemical Corp.	26,500	19.1	—	—	—	—	—	—	—	—
Calvert, Ky.	26,500	19.1	—	—	—	—	—	—	—	—
Total For All Producers	138,434	100.0	107,434	100.0	92,362	100.0	71,707	100.0	64,283	100.0

[a] Including Navy-owned cells, with a capacity of approximately 8,300 tons annually.

[b] Capacity increased to 22,500 tons in December 1960.

Source: Letters of November 1, 1960 and August 25, 1961 to Antitrust Division from Ansley Wilcox, 2nd Vice President and General Counsel of Hooker Chemical Corp.

Letters of October 26, 1960 and August 24, 1961 to the Antitrust Division from R. J. Hefler, and R. B. Coons, Vice-Presidents of American Potash and Chemical Corp.

Letter of September 14, 1960 to the Antitrust Division from Robert V. Massey, Jr of Barnes, Dechert, Price, Myers and Rhoads.

[fol. 2442]

Sodium Chlorate Data Table No. 5

Production of Sodium Chlorate West of the Rockies[a] and East of the Rockies[b] by Three Domestic Commercial Producers 1959-1960

(Short Tons)

	West		East		Total	
	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total
	1960					
Pennsalt Chemicals Corp.	17,028	45.7	—	—	17,028	18.5
Hooker Chemical Corp.	—	—	39,284	71.9	39,284	42.7
American Potash and Chemical Corp.	20,228	54.3	15,360	28.1	35,588	38.7
Total	37,256	100.0	54,644	100.0	91,900	100.0
	1959					
Pennsalt Chemicals Corp.	12,384	31.7	—	—	12,384	14.0
Hooker Chemical Corp.	—	—	37,150	75.5	37,150	42.1
American Potash and Chemical Corp.	26,633	68.3	12,087	24.5	38,720	43.9
Total	39,017	100.0	49,237	100.0	88,254	100.0

[a] Plants West of the Rockies are located in Nevada and Oregon.

[b] Plants East of the Rockies are located in Mississippi and New York.

Source: Letters of November 1, 1960 and June 30, 1961 to the Antitrust Division from Ansley Wilcox, 2nd Vice-President and General Counsel, Hooker Chemical Corporation.

Letters of October 26, 1960 and July 5, 1961 to the Antitrust Division from R. B. Coons and R. J. Hefler, Vice-Presidents, American Potash and Chemical Corp.

Letter of September 14, 1960 to the Antitrust Division from Robert V. Massey, Jr. of Barnes, Dechert, Price, Myers and Rhoads, and answers to Plaintiff's Interrogatory No. 81, Set V.

[fol. 2443] Sodium Chlorate Data Table No. 6

Production of Sodium Chlorate West of the Rockies[a] and East of the Rockies[b] by Three Domestic Commercial Producers 1957-1958

(Short Tons)

	West		East		Total	
	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total
	1958					
Pennsalt Chemicals Corp.	12,153	35.9	—	—	12,153	19.7
Hooker Chemical Corp.	—	—	27,740	100.0	27,740	45.0
American Potash and Chemical Corp.	21,707	64.1	—	—	21,707	35.2
Total	33,860	100.0	27,740	100.0	61,600	100.0
	1957					
Pennsalt Chemicals Corp.	8,431	26.5	—	—	8,431	15.0
Hooker Chemical Corp.	—	—	24,205	100.0	24,205	43.2
American Potash and Chemical Corp.	23,425	73.5	—	—	23,425	41.8
Total	31,856	100.0	24,205	100.0	56,061	100.0

[a] Plants West of the Rockies are located in Nevada and Oregon.

[b] Plants East of the Rockies are located in Mississippi and New York.

Source: Letters of November 1, 1960 and June 30, 1961 to the Antitrust Division from Ansley Wilcox, 2nd Vice-President and General Counsel, Hooker Chemical Corporation.

Letters of October 26, 1960 and July 5, 1961 to the Antitrust Division from R. B. Coons and R. J. Hefler, Vice-Presidents, American Potash and Chemical Corp.

Letter of September 14, 1960 to the Antitrust Division from Robert V. Massey, Jr. of Barnes, Dechert, Price, Myers and Rhoads, and answers to Plaintiff's Interrogatory No. 81, Set V.

[fol. 2444] Sodium Chlorate Data Table No. 7

Sodium Chlorate Plant Capacity for the Domestic Commercial Producers, West of the Rockies and East of the Rockies, 1961

(Short Tons)

	West		East		Total	
	Tons	Percent of Total	Tons	Percent of Total	Tons	Percent of Total
*Pennsalt Chemicals Corp.	15,434	35.5	—	—	15,434	11.1
Penn-Olin Chemical Corp.	—	—	26,500	27.9	26,500	19.1
Hooker Chemical Corp.	—	—	46,000	48.4	46,000	33.2
American Potash and Chemical Corp.**	28,000	64.5	22,500	23.7	50,500	36.5
Total	43,434	100.0	95,000	100.0	138,434	100.0

Note: Penn-Olin Chemical Corp. plant at Calvert City, Kentucky, started production in September 1961. Plants West of the Rockies are located in Nevada and Oregon. Plants East of the Rockies are located in Mississippi, Kentucky and New York.

* Capacity for 1960.

** Including Navy-owned cells, with a capacity of approximately 8,300 tons annually.

Source: Letter of August 25, 1961 to the Antitrust Division from Ansley Wilcox, 2nd Vice-President and General Counsel of Hooker Chemical Corp.

Letter of August 24, 1961 to the Antitrust Division from R. B. Coons, Vice-President of American Potash and Chemical Corp.

[fol. 2445] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 413

Civil Action No. 2282

UNITED STATES OF AMERICA, Plaintiff,

v.

PENN-OLIN CHEMICAL COMPANY, OLIN MATHIESON CHEMICAL CORPORATION AND PENNSALT CHEMICALS CORPORATION, Defendants.

Nonchlorate Stipulation

Plaintiff has raised the issue whether competition between Olin and Pennsalt in chemicals other than sodium chlorate and its derivatives is relevant to the validity of the joint venture.

Without waiving any objection as to the relevancy of that issue to this case, or of the following data to any issue in this case, defendants hereby stipulate with plaintiff, solely for the purpose of this case and for no other, that:

(1) Competent witnesses, if called by the plaintiff, would testify to the following:

(a) Olin and Pennsalt each produce and sell in commerce in the United States the following seven chemicals: ammonia, calcium hypochlorite, caustic soda, chlorine, hydrochloric acid, hydrofluoric acid and sulphuric acid. Competition, if any, in the sale of hydrochloric acid and sulphuric acid is de minimus. Olin and Pennsalt compete in the sale of five chemicals: ammonia, calcium hypochlorite, caustic soda, chlorine and hydrofluoric acid.

(b) In the case of calcium hypochlorite the relevant market is nationwide and the competition between Olin and Pennsalt in the sale of calcium hypochlorite is substantial.

[fol. 2446] (c) During the year 1960 Olin and Pennsalt both sold the following products in the states indicated in approximately the dollar volumes indicated:

	Pennsalt	Olin
Caustic Soda: Alabama, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, Virginia, West Virginia, Wisconsin, California.	$3,700,000	$18,670,000
Chlorine: Delaware, Illinois, Indiana, Iowa, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Virginia, West Virginia, Wisconsin.	$2,800,000	$ 4,370,000
Hydrofluoric Acid: Florida, Illinois, Indiana, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Missouri, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Tennessee, Texas, California, Oregon.	$3,520,000	$ 2,210,000
Calcium Hypochlorite: Alabama, Arizona, Arkansas, Colorado, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Nebraska, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Virginia, West Virginia, Wisconsin, Washington, Idaho, California, New Mexico, Oregon, Utah.	$2,100,000	$ 4,750,000
Anhydrous Ammonia: Delaware, Illinois, Indiana, Iowa, Kentucky, Maryland, Massachusetts, Michigan, Minnesota, Nebraska, New Hampshire, New Jersey, New York, Ohio, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Virginia, West Virginia, Wisconsin.	$1,620,000	$ 6,200,000
Aqueous Ammonia: Indiana, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania.	$ 105,000	$ 149,000

[fol. 2447] (d) The sales of Olin, Pennsalt and all producers of the particular chemicals shown for the years indicated are as shown in Appendix A attached hereto.

(e) The following industries use the chemicals set forth below:

	Ammonia	Caustic Soda	Chlorine	Calcium Hypochlorite	Hydrofluoric Acid
Chemical and Process Industries	x	x	x		x
Soap and Chemical Specialties Fields	x	x	x	x	
Metal Producing & Metal Working	x	x			x
Pulp and Paper Production	x	x	x	x	
Textile Mills, Laundries, Cleaners		x	x		
For Food Plants	x	x			
Water Treatment and Sewage Disposal	x		x	x	
Military Installations, Defense Uses and Atomic Energy Program	x	x	x	x	x
Petroleum and Natural Gases Industries	x	x	x	x	x
Glass and Ceramic Industries					x

Source: Pennsalt's 1956 Annual Report, pp. 19-23.

(f) Pennsalt produces the following chemicals at each of the plant locations shown:

	Wyandotte, Michigan	Calvert City, Kentucky	Portland, Oregon	Tacoma, Washington
Ammonia	x		x	
Calcium Hypochlorite	x			
Caustic Soda	x	x	x	x
Chlorine	x	x	x	x
Hydrofluori Acid		x		

[fol. 2448] (2) The presence or absence of substantial competition between Olin and Pennsalt with respect to production and sale of ammonia, caustic soda, chlorine, and hydrofluoric acid, or of the existence of any relevant market for such chemicals, is not relevant to the determination of any issue in this case.

Daniel J. Freed, Attorney for the Plaintiff, United States of America, Wm. Potter, Attorney for the Defendant, Penn-Olin Chemical Company, Cravath, Levant & Moore, Attorney for the Defendant, Olin Mathieson Chemical Corporation, H. Francis DeLone, Attorney for the Defendant, Pennsalt Chemicals Corporation.

Approved:

——, ——, United States District Judge.

November 6, 1961.

[fol. 2449]

Appendix A

Sales of Five Nonchlorate Chemicals by Pennsalt Chemicals Corp. and Olin-Mathieson Chemical Corp. Compared With Commercial Sales for All United States Primary Producers

	Year	All Producers	Total For PS & OM		Pennsalt		Olin	
		$	$	%	$	%	$	%
Ammonia:								
Anhydrous	1959	124,153,000	9,800,509	7.9	2,156,509	1.7	7,644,000	6.2
	1960	137,966,000	10,611,135	7.7	1,716,135	1.2	8,895,000	6.4
Aqueous	1959	2,853,000	629,113	22.1	362,271	12.7	266,842	9.4
	1960	2,731,000	547,324	20.0	298,067	11.0	248,257	9.1
Calcium Hypochlorite	1959	7,296,000	6,479,493	88.8	1,929,493	26.4	4,550,000	62.4
	1960	9,042,000	6,928,143	76.6	2,124,840	23.5	4,803,303	53.1
Caustic Soda	1958	166,868,000	28,185,495	16.9	8,425,495	5.0	19,760,000	11.8
	1960	184,472,000	28,680,808	15.5	9,431,808	5.1	19,249,000	10.4
Chlorine	1958	104,989,000	18,674,990	17.8	9,826,129	9.4	8,858,861	8.4
	1960	129,565,000	22,151,521	17.1	11,232,521	8.7	10,919,000	8.4
Hydrofluoric Acid	1959	21,580,000	6,771,456	31.4	4,156,579	19.3	2,614,877	12.1
	1960	22,334,000	5,923,053	26.5	3,594,517	16.1	2,328,536	10.4

[1] Sources: Figures for "All Producers Sales" are from the Bureau of the Census and represent commercial shipments, except for calcium hypochlorite and hydrofluoric acid where the shipments include interplant transfers.
The 1958 caustic soda total includes commercial shipment figures added to interplant transfer figures.
Pennsalt Sales data furnished by Pennsalt letter dated 6/22/61.
Olin Sales data furnished by Olin letter dated 6/22/61.

[fol. 2450] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 414

Civil Action No. 2282

UNITED STATES OF AMERICA, Plaintiff,

v.

PENN-OLIN CHEMICAL COMPANY, OLIN MATHIESON CHEMICAL CORPORATION AND PENNSALT CHEMICALS CORPORATION, Defendants.

General Stipulations Set I

Plaintiff and defendants hereby stipulate, solely for the purpose of this case and for no other, and without waiving objections as to relevancy, that competent witnesses, if called by plaintiff or defendants, would testify to the following:

* * * * * * *

4. Shipments of sodium chlorate by Pennsalt in years prior to 1958, and in the years 1958-1960, on behalf of Olin are as set forth in attached Stipulation Table 4.

5. Hooker Chemical Corporation sold to Olin and shipped to Olin's plant at Niagara Falls for consumption by Olin sodium chlorate in the quantities indicated opposite each year as follows:

[fol. 2451]

1957	1300 tons
1958	1100 tons
1959	1300 tons
1960	1350 tons
1961 (6 mos.)	560 tons

6. In January 1961, Olin salesmen using Olin invoices sold sodium chlorate to the following purchasers and in the quantities and dollar volumes indicated. It was contemplated by Olin and Pennsalt that, in the event Penn-Olin became an operating joint venture, such sales would be treated as having been made for Penn-Olin's account:

International Paper Co.	210.63 tons	$33,832.69
Brunswick Pulp & Paper Co.	58.81 tons	9,586.03

7. In February 1961, Olin salesmen using Olin invoices sold sodium chlorate to the following purchasers and in the quantities and dollar volumes indicated. It was contemplated by Olin and Pennsalt that, in the event Penn-Olin became an operating joint venture, such sales would be treated as having been made for Penn-Olin's account:

International Paper Co.	431.86 tons	$66,218.69
Brunswick Pulp & Paper Co.	109.28 tons	17,812.64
West Virginia Pulp & Paper Co.	106.40 tons	15,439.58
St. Mary's Kraft Corp.	52.34 tons	8,531.42
Scott Paper Co.	44.10 tons	7,008.30

8. Olin bought from American Potash for resale to the following companies and instructed American Potash to deliver from Henderson, Nevada, to the following locations, and American Potash shipped to those locations on the dates listed below, the tons of sodium chlorate set opposite each name. It has been contemplated by Olin and Pennsalt that, in the event Penn-Olin became an operating joint venture, such sales by Olin would be for Penn-Olin's account:

Crossett Paper Mills		
Crossett, Arkansas	March 28, 1961	45 tons
International Paper Co.		
Natchez, Mississippi	December 29, 1960	50 tons
Pine Bluff, Arkansas	January 17, 1961	100 tons
Moss Point, Mississippi	January 31, 1961	50 tons
Pine Bluff, Arkansas	March 2, 1961	50 tons
Pine Bluff, Arkansas	March 22, 1961	50 tons

• • • • • • • •

[fol. 2452] 10. Before December 1957 Olin never solicited sales of or sold sodium chlorate.

• • • • • • •

12. Sales in the United States of sodium chlorate produced outside the United States have not been substantial during the last five years.

These are as follows (FT 110, Dept. of Commerce):

1956	892 tons
1957	335 tons
1958	1322 tons
1959	2596 tons
1960	4152 tons

13. At present no company other than Pennsalt, Hooker and American Potash produces sodium chlorate in the United States for sale in the United States. However, in July 1961 Pittsburgh Plate Glass Company has announced that it is constructing a sodium chlorate plant which is to be completed about September 1962. In addition, Pacific Engineering & Production Company of Nevada announced in August 1961 that it plans to construct sodium chlorate production facilities.

• • • • • • •

[fol. 2453] 19. The net sales and operating revenues of Olin's Chemicals Division during 1957-1960 were approximately:

1957	$217,000,000
1958	207,200,000
1959	218,100,000
1960	216,900,000

• • • • • • •

[fol. 2454] 24. According to its annual reports, the total assets of Hooker Chemical Corporation during 1956-1960 were approximately:

1956	$122,900,000
1957	134,100,000
1958	151,000,000
1959	184,000,000
1960	187,300,000

25. According to its annual reports, the net sales of Hooker Chemical Corporation during 1956-1960 were approximately:

1956	$110,000,000
1957	107,900,000
1958	125,500,000
1959	149,800,000
1960	149,800,000

26. According to its annual reports, the total assets of American Potash & Chemical Corporation during 1956-1960 were approximately:

1956	$64,300,000
1957	65,300,000
1958	74,600,000
1959	72,600,000

27. According to its annual reports, the net sales of American Potash & Chemical Corporation during 1956-1960 were approximately:

1956	$41,800,000
1957	42,800,000
1958	47,900,000
1959	54,600,000
1960	50,500,000

28. According to its 1960 Annual Report, the total assets of Allied Chemical Corporation during 1956-1960 were approximately:

1956	$742,000,000
1957	756,500,000
1958	748,300,000
1959	785,300,000
1960	800,900,000

[fol. 2455] 29. According to its 1960 Annual Report, the sales and operating revenues of Allied Chemical Corporation during 1956-1960 were approximately:

1956	$668,800,000
1957	683,100,000
1958	635,500,000
1959	719,700,000
1960	765,800,000

30. According to its 1960 Annual Report, the total assets of Pittsburgh Plate Glass Company during 1956-1960 were approximately:

1956	$555,300,000
1957	574,800,000
1958	561,400,000
1959	619,300,000
1960	624,800,000

31. According to its 1960 Annual Report, the net sales of Pittsburgh Plate Glass Company during 1956-1960 were approximately:

1956	$596,600,000
1957	620,800,000
1958	513,600,000
1959	606,900,000
1960	628,000,000

32. Between 1955 and 1960 Pennsalt did not apply to any bank or other lending institution to borrow funds to finance any sodium chlorate venture.

33. Between 1955 and 1960 Olin did not apply to any bank or other lending institution to borrow funds to finance any sodium chlorate venture.

• • • • • • •

[fol. 2456] 35. The domestic joint venture to which Olin Industries, Inc. was a party was as follows:

Joint Company	Other Parent	Year Organized	Principal Product
Matholin Corporation (a)	Mathieson Chemical Co.	1953	hydrazine

(a) Due to patent problems and delays, company was never activated. It was liquidated into Olin Mathieson in 1954.

[fol. 2457] 37. The domestic joint venture to which Mathieson Chemical Corporation was a party was as follows:

Joint Company	Other Parent	Year Organized	Principal Product
Matholin Corporation (a)	Olin Industries, Inc.	1953	hydrazine

(a) Due to patent problems and delays, company was never activated. It was liquidated into Olin Mathieson in 1954.

[fol. 2458] 38. On August 31, 1954, Olin Industries, Inc. merged with Mathieson Chemical Corporation to form Olin Mathieson Chemical Corporation. Sales and assets of the merging companies in 1953 were:

	Sales	Assets
Olin Industries	$228,250,440	$232,512,305
Mathieson	243,575,544	339,261,236

[fol. 2459] 39. The domestic acquisitions and mergers of Olin Mathieson Chemical Corporation to date have been as follows:

Acquired Company	Year Acquired or Merged	Principal Product	Approximate Purchase Price
Calabama Chemical Co. Huntsville, Ala.	1954	manufacture of DDT	$ 580,000
Marquardt Aircraft Corp.	1954	ramjet aircraft engines	(25% of stock purchased, all of which was disposed of prior to 1961)
Hunter Engineering Corporation Riverside, California	1954	aluminum sheet, bars machinery	(51% of stock acquired, all of which was disposed of prior to 1961)
Blockson Chemical Co. Joliet, Illinois	1955	sodium phosphates	$57,500,000
Brown Paper Mill Co., Inc. (a)	1955	465,000 acres of timberlands—pulp—paper Kraft paper products	$88,000,000
Mississippi Aluminum Corp. Gulfport, Mississippi	1956	aluminum extrusions	$ 525,000
Southern Electrical Co. Chattanooga, Tennessee	1957	aluminum wire and cable	$ 6,500,000
Almetco, Inc.	58-1959	aluminum extrusions	$ 2,000,000

(a) Acquisition also included four related converter companies, Brown Paper Industries, Inc., Brown Containe. Co., Inc., The Negley Bag and Paper Co., and the Krafco Container Corporation, all owned by the same family who owned Brown Paper Mill Co., Inc. In 1958, approximately 211,000 acres of timberland were sold.

[fol. 2460] 40. The domestic joint ventures to which Olin Mathieson has been a party are as follows:

Joint Company	Other Parent	Year Organized	Principal Product	Value of Facility
Ormet Corporation (and related subsidiaries)	Revere Copper & Brass, Incorporated	1956	aluminum	$250,000,000
SunOlin Chemical Co. (a)	Sun Oil Company	1958	urea	$ 7,000,000

(a) SunOlin is constructing an ethylene and ethylene oxide plant.

[fol. 2461] 41. The domestic acquisitions and mergers of Pennsalt since 1951 are:

Acquired Company	Year Acquired or Merged	Principal Product	Approximate Purchase Price
Sharples Chemicals, Inc. Riverview, Michigan	1951-1952	synthetic chemicals	$5,400,000
Gilron Products Co. Cleveland, Ohio	1954	drawing compound and metal cleaners	$ 127,000
I. P. Thomas & Son Co. (a)	1955	fertilizer, sulphuric acid, phosphoric acid	$1,150,000
Index Chemical Co. (b) Houston, Texas	1955	organic sulphur	$ 490,000
Delco Chemicals, Inc. Los Angeles, Calif.	1956	specialty cleaning and paint stripping compounds	$1,900,000

(a) Sold to Dixon Chemical Industries, Inc. in 1958-1959.
(b) An additional 20% interest was acquired in 1959 for $387,450.

[fol. 2462] 42. The domestic joint ventures to which Pennsalt has been a party are:

Joint Company	Other parent	Year Organized	Principal Product
Solar Salt Company	Hooker Chemical Co. (a)	1951	salt

(a) Twenty-three individuals also own Class A common stock of Solar Salt Company.

[fol. 2463] 43. Sodium chlorate of like purity is a fungible commodity, and all sodium chlorate produced for sale by any domestic producer is reasonably interchangeable with that of any other domestic producer.

44. Sodium chlorate constitutes a single line of commerce within the meaning of Section 7 of the Clayton Act.

45. Olin's dollar sales of all products in 1960 to the companies listed beow, all of which are either actual or potential sodium chlorate consumers, or affiliates of such companies (see Appendix of PX 274) totalled $30,884,000. Olin's purchases from those companies marked with an "x" totalled $13,740,000.

American Can Company	x
Bowater's Corporation of North America Ltd.	
Champion Paper & Fibre Company	x
Container Corporation of America	x
Continental Can Corporation	x
Coosa River Newsprint Company	x
Crossett Company	x
Crown Zellerbach Corporation	x

Gilman Paper Corporation	x
Glatfelter Company, P. H.	
Gulf States Paper Corporation	x
Hudson Pulp & Paper Corporation	x
International Paper Company	x
Mead Corporation, The	x
Nalco Chemical Company	x
Nekoosa-Edwards Paper Company	
Oxford Paper Company	
Packaging Corporation of America	x
Penobscot Chemical Fibre Company	
Procter & Gamble Company	x
Rayonier Inc.	x
Riegel Paper Corporation	x
Scott Paper Company	x
Standard Packaging Corporation	x
St. Regis Paper Company	x
Thilmany Pulp & Paper Company	
Time, Inc.	x
Union Bag-Camp Paper Corporation	x
Waldorf Paper Products Company	
West Virginia Pulp & Paper Company	x

[fol. 2464] 46. Pennsalt's dollar sales of all products in 1960 to the companies listed below, all of which are either actual or potential sodium chlorate consumers, or affiliates of such companies (See Appendix of PX 274) totalled $6,625,996.

Packaging Corporation of America (including American Boxboard Co. Inc., and Continental Paper Products Co.)
American Can Co. (Marathon Division)
Scott Paper Co. (including Coos Bay Pulp Corp.)
The Procter & Gamble Co. (including Buckeye Cellulose Corp., and Charmin Paper Mills)
Crown Zellerbach Corp.
Container Corporation of America
Continental Can Corp.
International Paper Co.
St. Regis Paper Co.
Union Bag-Camp Paper Corp.

West Virginia Pulp & Paper Co.
Nalco Chemical Co. (including Visco Products Co.)
Crossett Paper Mills
Glatfelter, P. H. Co.
Gulf States Paper Corp.
Nekoosa-Edwards Paper Co.
Rayonier, Inc.
Riegel Textile Corp.
Waldorf Paper Products
Allied Chemical Corp.
Chipman Chemical Co.
Olin Mathieson Chemical Corp.

Pennsalt's purchases in 1960 from such companies, listed below, were $1,249,747.

American Can Company (including the Marathon Division)
Crown Zellerbach Corp. (including the Gaylord Container Division)
Container Corporation of America
Continental Can Corporation (including the Robt. Gair Division)
St. Regis Paper Co. (including Rathborne Hair & Ridgeway Box Co.)
Union Bag-Camp Paper Corp.
West Virginia Pulp & Paper Co.
Crossett Paper Mills
Olin Mathieson Chemical Corp.
Chipman Chemical Co.
Hudson Pulp & Paper
Allied Chemical Corp.

(Gen'l Chem & Solvay Divs.)

[fol. 2465] Daniel J. Freed, Attorney for the Plaintiff, United States of America, Wm. Potter, Attorney for the Defendant, Penn-Olin Chemical Company, Cravath, Levant & Moore, Attorney for the Defendant, Olin Mathieson Chemical Corporation, H. Francis DeLone, Attorney for the Defendant, Pennsalt Chemicals Corporation.

[fol. 2466] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 415

Inter-Office Correspondence

Los Angeles, California

February 12, 1957.

To: Board of Directors
Attention: Messrs. L. L. Austin, R. B. Coons, D. S. Dinsmoor, W. S. Glazier, W. J. Hutchinson, W. P. Scott, R. E. Vogel

Copy to: PSD:LA
WJFF:LA
JCS:LA
GSW:LA
RJH:LA
BMH:LA

Subject: New Sodium Chlorate Plant in Mississippi

We propose to build a plant near Aberdeen, Mississippi for the initial production of 15,000 tons per year of sodium chlorate for delivery to present and potential Eastern customers. The estimated cost of this facility is $5,000,000, and the total investment, including working capital, is estimated at $5,500,000. On the basis of the present market price of sodium chlorate the estimated return on the total capital investment is 8.0%.

Market

We expect to use 27,000 tons equivalent sodium chlorate in 1957 (including perchlorates), of which 14,500 tons will be shipped as sodium chlorate to the East and Southeast. The major portion of our Eastern sales goes to pulp mills which use the Solvay chlorine dioxide process for bleaching pulp. The balance is sold for weed killing. Sales of chlorate for the former are made through the Solvay Division of Allied Chemical & Dye Corporation, to whom we pay a 5% commission as sales agents. Solvay has advised us of new pulp installations being built or planned which, in their

opinion, will conservatively require 9,000-10,000 tons additional chlorate by 1960-1961. Most of this expansion will be in the East. Solvay's principal interest in this business is to sell various chemicals manufactured by them and used in the process they furnish. To do this, their customers need to be assured of an adequate supply of sodium chlorate.

We also anticipate a steady increase in the requirement of sodium chlorate for conversion to perchlorates. Figures based on the programs discussed with our customers in this field indicate an increase of up to 6,500 tons of ammonium perchlorate by 1960-1961, and there is some reason to anticipate that the increase may go substantially beyond this figure. The annual capacity of the ammonium perchlorate facility at Henderson is estimated at 10,000 tons. It takes a little over a ton of sodium chlorate to make a ton of ammonium perchlorate.

The present sodium chlorate capacity at Henderson is around 27,000 tons per year. Hence, if we are to obtain any of the additional chlorate and perchlorate business that is in sight, we must have new facilities available not later than the summer of 1958.

[fol. 2467] Location

On sodium chlorate shipments from Henderson to the East we have a heavy freight equalization (approximately $25 per ton) against material supplied by Hooker (formerly Oldbury) either from their Niagara Falls plant or the relatively new facility at Columbus, Mississippi. Detail study of present and potential Eastern customers developed that the optimum site from the standpoint of freight was some point in the northern Alabama—northern Mississippi area. This area is also served with power by TVA which is the lowest cost still available in any Eastern area (4.5 mills). Field investigation of available sites has narrowed our choice to a 586 acre site which we have under option for $75,000 ($125 per acre) at Aberdeen, Mississippi. Our studies show that this site should be suitable on all counts and give us somewhat lower total costs than sites examined along the Tennessee River.

Plant Design

We have spent considerable engineering time examining the various elements of the sodium chlorate process now used at Henderson and endeavoring to determine whether either capital or operating cost advantages might be gained from purchase of equipment design or operating information from some outside source.

E. C. Krebs of Krebs & Cie was retained as a consultant and provided valuable information. It was the conclusion of Mr. Dinsmoor's project engineering group, however, that the possible advantages of the installation proposed by Krebs or a modified cell design which was available from Pennsylvania Salt Manufacturing Company were not sufficient to justify the additional costs involved or the risk in adopting a process modification with which we have had no direct experience.

We consequently propose to use in the new plant the Schumacher cell in use at Henderson but with certain mechanical improvements. The method of operation and recovery process will, however, be somewhat different from the Henderson procedure in order to take advantage of certain conditions in Mississippi, particularly the lower cost of fuel and the adequate supply of low temperature cooling water.

In making the final layout, care will be taken to make it possible to add 50% additional capacity at some future date without any major disruption to the presently contemplated installation and buildings. This provision is made because some of the more optimistic estimates of requirements both for pulp bleaching and conversion to perchlorates indicate that such additional capacity might be needed by 1961.

The Hooker Columbus plant had an initial capacity of 12,000 tons in 1954. This was increased to 17,000 tons in 1956, and a further increase to 22,000 tons has been announced recently.

[fol. 2468] Financial Considerations

A preliminary estimate made by C. F. Braun on the latest flowsheet developed by our engineers indicates an approximate cost of $5,000,000. We believe that the definitive estimate based on detailed engineering and quotations will not

exceed this figure, and we have some hope that by further engineering studies the amount may be slightly reduced. Adding to this about $75,000 for the land we need and working capital requirements, we will have a total requirement of approximately $5,500,000. On the basis of present prices and full operation, we estimate earnings after depreciation (15 year life) and income taxes at $437,000 per year, or a return of 8.0%. This is arrived at as follows:

Sale of 15,000 tons at	$155 per ton	$2,325,000
Manufacturing cost	70 per ton	1,050,000
Gross income	85 per ton	$1,275,000
Depreciation	22 per ton	328,000
Profit before income taxes	63 per ton	$ 947,000
Net profit after income tax	29 per ton	$ 437,000

A preliminary estimate with respect to the rate of cash requirements for this project shows a total of $3,000,000 in 1957, of which $2,100,000 will be required during the fourth quarter of the year, $650,000 during the third quarter, and $250,000 during the first six months. The estimate for 1958 calls for $1,500,000 in the first quarter, $800,000 in the second quarter, and the balance of $200,000 in the third quarter.

A cash forecast showing the effect of these requirements on our over-all cash position as of the year-end and September 30, 1958 will be available for the February 18th meeting.

We recognize that there will be an interval of two or three years before we can expect to sell full production of the new plant in addition to full production from the Henderson unit. During this period, however, we can gain some advantage by running the new plant full and reducing the rate at Henderson. This will eliminate some of the freight equalization which would otherwise be paid on tonnage shipped East from Henderson and at the same time reduce the latter plant's requirement of steam derived power which costs us approximately 7 mills per kilowatt hour as against the 4.5 mill TVA rate.

While the return on this investment is not as attractive as some we have proposed, there are a number of factors that must be taken into consideration. In the first place, the present price of chlorate in the East is nearly a cent a pound lower than the Western price. With rising costs

there should be pressure to bring the Eastern price up to the Western level. If such an adjustment is reached it would represent an addition of about 1.9% on the net return on [fol. 2469] the investment, or a total of 9.9%.

The second consideration is that we are the major factor in perchlorates today and the only producer of ammonium perchlorate. We believe that perchlorates are as of today the best available oxidizing agent for use in solid propellant types of missiles. We have a predominant position not only because of our experience with and knowledge of perchlorates, but because we are approaching completion of the development of lead dioxide anodes for the electrochemical conversion of chlorate to perchlorate. The successful completion of this development will remove one of the great stumbling blocks to the unlimited use of perchlorates in propellant mixtures. Hitherto the conversion of chlorates to perchlorates has required platinum anodes, and it has been thought that the limited supply of platinum and, hence, the limit on possible expansion of production might prove a serious deterent to adoption of perchlorates. We now think that there is little question of the successful substitution of the lead dioxide anode which will make possible practically unlimited expansion of perchlorate production in case of emergency.

We feel that the expansion of our perchlorate business will be a sound and profitable venture and that increase in our chlorate capacity, and particularly the establishment of a second manufacturing location, is a prerequisite to growth in the more profitable perchlorate field. If a second ammonium perchlorate facility is required at some later date, it seems logical to suppose the location would be other than at Henderson and, accordingly, if it be Government sponsored, our chances of capitalizing on our know-how and building it would be much better if it were based on a chlorate plant owned by us in the East.

Proceeding with this project will also have a defensive value in our efforts to promote the sale of sodium chlorate. It is the Sales Department's feeling that our position will be considerably strengthened over the years by having a producing plant for this material located at a point where we are on a freight parity with our principal competitor's plant serving the area of greatest current and anticipated

growth for sodium chlorate requirements by the pulp industry. Ideally, we should use the sodium chlorate production at Henderson either for conversion into ammonium and potassium perchlorate and potassium chlorate or for shipment as sodium chlorate to the consuming areas where our competitive position freight-wise is favorable; and to gradually expand the Eastern facility in line with the growth in demand for sodium chlorate in that area whether for use as such or for ultimate manufacture of perchlorates.

It is also envisioned that we may ultimately serve Eastern match company plants with potassium chlorate from Aberdeen, thus saving the current freight equalization of some $40 a ton.

We recommend that the Board approve the sodium chlorate expansion project at its next meeting so that we may proceed without delay on the detailed engineering. Time is [fol. 2470] important, as we must promptly make a firm power contract with TVA in order that they may have the necessary power lines and substation approved and installed by the time our plant should be ready to operate. This is planned for July 1, 1958.

Peter Colefax.

PC:aa

[fol. 2471] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 420

Extract from —Management Committee Meeting No. 103

Date —June 25, 1959

Convened: 9:30 a.m. to 4:00 p.m.

Members Present—Messrs. Clark, Clem, Drake, LaLande, Land, and Willits

Members Absent —Messrs. Collins, McWhirter, and Shanaman

*VII. Ammonium Perchlorate

Mr. Drake said that *Missiles and Rockets* magazine issue of June 1 reported that 2600 minute man units may be produced requiring over 120 million pounds of ammonium perchlorate. This is equal to the three-year output of the total present capacity.

X. Program for Future Growth

G. Chlorate-Perchlorate Completion

This project was dropped from the list because it does not apply to 1960.

[fol. 2472] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 422

Olin Mathieson Chemical Corporation

Date: August 28, 1959.

To: Mr. C. C. Hightower at Baltimore
From: Kennett Lewis at Baltimore
Subject: Sodium Chlorate Production

Copy To: Mr. J. L. Wood,
Mr. E. L. Rice.

Forwarded herewith is the file on Sodium Chlorate. I asked Ed Rice to peruse the subject material and check with Mr. Wood regarding utilities, costs and related items for the Chattanooga location. Joe Wood advised Ed that he had previously reviewed the chlorate information and had no specific comments other than to the effect that the cost estimates appeared to be in order. On the specific question of energy costs, Joe advised that his latest information for the Chattanooga location indicated that the assumed unit costs were "in the ball park."

Ed Rice has tabulated the data and comparison tables which should give a quick rundown.

Specifically with respect to the cost of graphite versus platinum titanium, we wish to point out that the platinum titanium is charged at $70/troy oz. The platinum market today is $78-80/troy oz. A few months ago we purchased 400 troy ozs. at $52/troy oz. This serves to emphasize that the cost of platinum is variable and can be anything up to $90-95/troy oz. Some years ago we paid as high as $100/troy oz. for one purchase. Over a long period of time the platinum price might be assumed as $85-90/troy oz. for new metal.

I checked with Dr. W. C. Gardiner regarding the possibility of recovering spent platinum titanium metal. If it is possible to collect the spent catalyst, the metal could be recovered by refining in much the same manner as spent platinum rhodium catalyst is reclaimed. Dr. Gardiner advised that this aspect had not been investigated, and he

could, therefore, offer no comments as to the feasibility of recovery. It is not known whether spent metal can even be found and collected. It, therefore, appears that more study should be given to the platinum titanium anode picture.

Kennett Lewis.

KL:CA
Enc.
8/28
CCH

When you're finished with the attached 4 Research reports, we have to return them to BHW's file.

[fol. 2473] In United States District Court

Plaintiff's Exhibit 424

Pennsalt Chemicals Established 1850

Subject: Southern Pulp & Paper Manufacturer
Date: April 29, 1960
To: Mr. R. T. Mills
From: Marshall T. Ramstad
Copies To: M32, S25

Industrial Chemicals-West has continued advertising in the subject publication and featuring our sodium chlorate. This advertising was originally aimed at strengthening Pennsalt's relationships with Olin Mathieson who served as the sales outlet for that area.

With the proposed Penn-Olin chlorate plant at Calvert City now anticipated to be in production in 1961, it can be expected that shipments of chlorate from the Portland plant will eventually be discontinued.

This is to inquire whether there has been any thought given to Penn-Olin advertising sodium chlorate in the South and other adjoining market areas in anticipation of the 1961 production.

It would appear to me that this is a matter for discussion. Industrial Chemicals-West could not be expected to bear the full advertising costs for sodium chlorate during this

interim period without some financial participation by Penn-Olin.

We would appreciate any comments you might have on this subject.

M. T. Ramstad.

MTR:es

[fol. 2474] In United States District Court

Plaintiff's Exhibit 426

[Extract]

Financial and Operating Policy Committee
Minutes of Meeting
September 27, 1960

Present: Mr. J. M. Olin, Chairman, Mr. J. W. Hanes, Mr. T. S. Nichols, Mr. S. de J. Osborne.

1. Capital Appropriation Requests

The following capital appropriation requests were approved for recommendation to the Executive Committee at its meeting tomorrow:

Capital Appropriation Request No. 172-001-377C
$3,227,000

Chemicals Division
Penn-Olin Chemical Company Investment
Calvert City, Kentucky

* * * * * * *

[p. 3]

Respectfully submitted, S. de J. Osborne.

SdeJO:JF

[fol. 2475] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 427

Extract from—Appropriations Committee Meeting No. 41
Date—October 14 and November 3, 1960
Members Present—Messrs. Clark, Clem, Drake, LaLande (2nd meeting), Willits and Tuttle
Others Present—Messrs. Istas and McWhirter (1st portion of 1st meeting), Collins

I. ID-001-PO—"Penn-Olin Sodium Chlorate Plant"

1. Investments of $1.5 million each by Olin and Pennsalt respectively had been previously approved by their parent Boards. The review of ID-001-PO by the Appropriations Committee was preliminary to its formal submission to the Penn-Olin Board for approval.
2. The request called for a total investment of $7,257,000, on which there was an average pre-tax return on the total project of 19.5%.
   Since this project had been previously reviewed by various sections in the Company, only a limited review was made at this time. Mr. Drake did ask, however, the reason behind the increase in the project return over that which was estimated previously. Mr. McWhirter said it stemmed from lower capital cost estimates (e.g. less expensive rectification facilities), plus the elimination of all packaging operations.
3. It was emphasized that this project and its economics were prepared prior to any finalization of either the sales or service agreement. Mr. Clem stated, however, that the final sales agreement would be within the allowance made for selling expenses in the request, and Mr. McWhirter said the same was true for the service agreement and the appropriation request manufacturing cost estimates. In answer to a further question by Mr. Drake, Mr. McWhirter said that Pennsalt should obtain additional savings (i.e. over and above those in the request) of about $180,000 through the absorption by

Penn-Olin of Calvert fixed costs, etc. Although these savings were assured, they would not be obtained, however, without some additional investment on Pennsalt's part. This included the new pumping station and a railroad siding but, in total, would not exceed $100,000 to $125,000.

[fol. 2476] It was also brought out, however, that the depreciation rates shown for the Penn-Olin Chlorate plant were substantially slower than for similar facilities at Portland. Mr. Istas confirmed this fact stating that this had been done to improve the profitability of Penn-Olin; at the same time, they should not be considered as being unrealistically low.

4. Mr. McWhirter confirmed that he had the necessary people to staff this operation.
5. The Committee approved Appropriation Request ID-001-PO.

ID-001-PO Penn-Olin Chlorate Plant Approved.

[fol. 2477] IN UNITED STATES DISTRICT COURT

PLAINTIFF'S EXHIBIT 428

Olin Mathieson Chemical Corporation

Extract

Date: October 14, 1960.

To: Mr. E. Block (6) at Baltimore
From: Corporate Staff at 460 Park Avenue
Subject: Staff Comment on Chemicals Division, Whither Report

Copy To: Mr. S. de J. Osborne.

I. General

The document entitled "Chemicals Division Capital Requirements 1960—1964—Ex Organics" submitted as of July 1960 does not, in the Staff opinion, qualify as a "Whither Report," and the Staff recommends that the Chemicals Division prepare and submit a consolidated "Whither Report" covering the period 1961—1965 at the earliest date practicable.

In the paragraphs following are specific suggestions from the Staff concerning matters to be included in such a Chemicals Division "Whither Report."

II. Overall Objective of the Chemicals Division

The Staff considers that the broad objectives of the Chemicals Division are no longer adequately stated by the 1958 "Division Objectives Report" and require reappraisal and restatement in less general terms. Specifically, the Staff believes that the overall objective of the Chemicals Division during the period 1961—1965 is properly that of substantially improving its present rate of return on gross investment, which now compares unfavorably with its major competitors as shown in the table "Other Company Comparisons" on the following page.

The Staff regards return on gross investment as the most meaningful index of divisional growth.

III. Basic Decisions Required in Order to Focus on Overall Objective

The Staff considers that, in order to attain the overall objective of increased return on gross investment, the Chemicals Division must necessarily propose, in this "Whither Report," basic decisions with respect to the future path which each of its several component Operations and Joint Ventures, namely: Agricultural, Organics, Blockson, and Industrial, Penn-Olin and Sun-Olin, should follow during the five-year period to be covered by the report.

[fol. 2478]

Other Company Comparisons

1959 Ranking (Return on Gross Assets)	% Return on Gross Assets		% Return on Sales	
	1959	1958	1959	1958
1 Smith Douglass	7.0	4.7	6.4	4.9
2 American Ag. Chem.	5.6	5.4	5.5	6.1
3 OMCC Agricultural Chemicals*	2.4	0.4	3.4	0.5
4 Va-Car. Chemical	1.2	1.8	1.3	2.7
1 Tennessee Corporation	9.9	7.2	12.7	10.0
2 OMCC Blockson*	8.7	7.9	9.3	8.9
3 Harshaw Chemicals	4.6	5.5	3.1	3.3
1 Stauffer Chemical Co.	7.8	6.8	9.7	8.5
2 Hooker Chemical	5.8	5.1	8.9	8.5
3 OMCC Industrial Chemicals* (ex Organics)	5.7	4.7	9.3	7.9
4 Diamond Alkali	5.1	3.1	8.2	5.7
5 Wyandotte	2.5	1.7	4.8	3.5
1 DuPont (ex General Motors)	7.7	8.5	14.1	12.1
2 Union Carbide	6.5	5.1	11.2	9.6
3 OMCC Chemicals Division* (ex Organics)	6.2	4.7	8.2	6.6
4 American Cyanamid	5.9	5.3	9.0	8.3
5 Dow Chemical	5.7	3.6	10.3	7.0
6 OMCC Chemicals Division* (incl. Organics)	5.4	4.0	7.7	6.2
7 Monsanto Chemical	4.9	3.9	8.0	6.3

* After Corporate charges, including interest on borrowings, for purposes of comparison.

[fol. 2479] The Staff is of the opinion, correctly or incorrectly, that the Chemicals Division now lacks a specific objective and a plan tailored to the attainment of this objective, and is therefore forced to operate on what is essentially an opportunistic basis.

IV. General Measures to be Employed In Improving Return on Investment

The Staff believes that this overall Divisional objective can be accomplished through a combination of efforts in the following directions:

a. Recognition by Chemicals Division personnel generally, that the basic task is that of increasing return on gross investment.
b. Improvements in Divisional organization incorporating the Line and Staff concept, accompanied by general upgrading of management personnel.
c. New investment in areas where the opportunity of return on investment is greatest.
d. Institution of cost reduction programs in existing operations both in terms of increased efficiency of existing facilities, and in terms of new investment for cost reduction purposes.
e. Elimination of minor unprofitable and marginal operations tending to divert management attention.
f. Reappraisal and redirection of research and development activities in accord with the Divisional objectives.

In support of these general statements the Staff offers the arguments contained in the following paragraphs for examination by the Chemicals Division in the course of its preparation of the Whither Report.

V. Present Indications as to Future Results of Chemicals Division

The Comptroller's Office has prepared indicated financial results of the Chemicals Division based on all presently available information, including 1960 "rough estimates," economic evaluation from CAR's and from Chemical Division "Whithers" for the period 1960—1965 which is presented in summary form in the table shown on the following page.

[fol. 2480] (Extract)

Chemicals Division

Indicated Return on Gross Investment

(Divisional Level before Corporate Expense)
(000 Omitted)

(Actual)

	1959	1960	1961	1962	1963
Industrial					
Gross Investment	155,859	171,488	203,497	212,240	213,751
Net Profit	13,012	13,299	15,070	16,837	17,713
% Ret. on Gross Inv.	8.3	7.8	7.4	7.9	8.3
Penn Olin (50%)					
Gross Investment		850	3,564	3,564	3,564
Net Profit			(12)	117	358
% Ret. on Gross Inv.				3.3	10.1
Total Chemicals					
Gross Investment	303,111	342,230	403,523	433,294	446,367
Net Profit	19,381	18,516	22,579	28,009	31,789
% Ret. on Gross Inv.	6.4	5.4	5.6	6.5	7.1

[fol. 2481] The Staff concludes, from examination of this data, that the programs so far advanced by the Chemicals Division, after taking into effect the shrinkage between predicted and realized earnings, will not have the desired effect of substantially increasing return on gross investment, and that a "new look" is essential.

VI. Basic Chemicals versus Upgrading

The Staff is of the opinion that a primary decision to be faced in Chemicals Division in shaping a program to accomplish the objective, is whether to continue expansion in low value merchant chemicals, or whether to concentrate on upgrading, and simultaneously increase the captive use within the Division and the Corporation of basic chemicals now or presently scheduled to be produced by the Chemicals Division.

The Staff has noted with great concern the downward trend in return on investment on basic chemicals for merchant purposes and seriously questions the wisdom of continuing to invest large amounts of money in this segment of the Division's business.

The Staff seriously questions the merit of the arguments previously raised that it is necessary or desirable that the Chemicals Division maintain its share of the domestic market for basic merchant chemicals, and particularly that it is either necessary or desirable to make a major investment in low profit basic merchant chemicals for the purpose of keeping competitors out of that market, or to keep major customers from building their own plants.

From the table of "Other Company Comparisons" previously cited, it is apparent that those companies ranking above the Chemicals Division in earnings on investment are predominantly "upgraders," while those ranking below are predominantly producers of merchant chemicals. The Staff is of the opinion that the route to greater profits in the Chemicals Division is in the direction of doing as much work as possible on every item produced before its sale.

VII. Cost Reduction Programs

The Staff is aware that, for reasons beyond the control of the Chemicals Division, certain of its facilities are overdue for replacement and modernization, and believes that expenditures for the purpose of cost reduction are important to the attainment of the desired objective.

The Staff is also of the opinion that investment in capable personnel for the purpose of operating existing facilities at increased efficiency, and for the purpose [fol. 2482] of searching out opportunities for cost reduction, are an essential part of a cost reduction program.

The Staff has the general impression that the Chemicals Division has devoted less attention and effort to cost reduction programs in existing operations than it

has to expansions and new projects which latter have an inherently greater risk for the same predicted return.

VIII. Elimination of Unprofitable or Marginal Operations

Certain of the Chemical Division's activities, including the resale of chemicals produced by others, and the operation of certain minor plants identified in the Appendix hereto as "Low Margin Plants," are individually unattractive financially.

The Staff regards as essential to the development of a planned program a close examination of the merit of continuing these activities both from a strict financial viewpoint, and also from the point of view of dilution of Chemical Division management attention.

IX. Relative Profit Potential in Each Element of the Chemicals Division

The Staff is of the opinion that the extent and rate of growth of each Operation of the Chemicals Division should be proportional to the ability of the Operation to contribute toward improved return on investment of the Chemicals Division as a whole.

In effect, this means that a single investment standard for capital projects should be set for Chemicals Division as a whole rather than individual standards for each Operation according to some measure of the historical profitability of each.

This practice will have the effect of placing the bulk of new funds in the most profitable areas and, conversely, of restricting expenditures in other areas where the profit potential is least, to replacements and to cost reduction projects having an adequate return.

The Staff believes that, under such circumstances, growth will take place in the direction of upgrading rather than in the direction of expansion in basic merchant chemicals.

[fol. 2483] X. Reappraisal of Research and Development Effort

The Staff is particularly concerned in that a substantial part of the Chemicals Division's research and development effort is presently directed toward the development of processes for the production of chemicals now established in the market place for which the necessary know-how exists in the hands of others and might better be obtained by purchase. The Staff is of the opinion that the proper function of Chemicals Division process research is to develop original technology for novel products and to develop processes for established products only when the necessary know-how cannot be obtained from others on reasonable terms.

If the route to greater return on investment in the Chemicals Division lies in the direction of upgrading, then it is evident that the Chemicals Division's research and development effort must be redirected and augmented to provide future opportunities for the production of novel chemicals.

It appears to the Staff that the fruits of such a program cannot be realized to any considerable extent in the next five years but should be directed to provide the second generation of upgraded chemical products.

The Staff is of the opinion that the know-how for upgraded products to be produced during the five-year period must be derived principally by acquisition from third parties, but that it is essential that the ground work for the second generation of projects be laid now based on an objective appraisal of where future profits lie.

* * * * * * *

[fol. 2484] H. J. Reed, (For Corporate Staff).

cz

[fol. 2485] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 1

Pennsalt Chemicals

Subject: Chlorates Opportunities East of the Rocky Mountains (Ammonium Perchlorate)

Date: November 11, 1958
To: Mr. R. W. Sloan
From: R. J. Eastman
Copies To: L-9, W-17, K-5

Mr. Karr telephoned yesterday and asked that the following information developed last week in Washington, D.C., be brought to the attention of Technical Division personnel.

1. The ammonium perchlorate plant (Hooker—HEF) under construction at Columbus, Mississippi will have a rated capacity of 2,000 TPY (Note: This confirms the capacity estimate discussed in the chlorate meeting 11/3/58).

2. There is a possibility that "double accounting" exists in the several estimates of future demand for ammonium perchlorate obtained from the rocket engine manufacturers (each company may be projecting its demand on the basis of obtaining all of the business). This possibility will be investigated further.

3. In view of the possibility of reduced demand and greater installed capacity, P.C.C. should prepare for future examination a cost estimate on an alternate Eastern venture producing for sale 20,000 TPY sodium chlorate and only 5,000 TPY ammonium perchlorate.

* * * * * * *

In view of this information, Mr. Karr suggested that Technical Division might want to prepare an alternate case scaling perchlorate cost estimates from the 10,000 TPY plant to a 5,0000 TPY. (Note: This level was earlier estimated based on findings of the Market Report 10/9/57. Review and updating will be required.)

RJE/AKK

[fol. 2486] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 2

Ammonium Perchlorate—General August 15, 1960.

Mr. H. C. Land
P. C. Staples
C20 D11 K5 M32

Attached is a communication from the Department of Defense which we received today here in Tacoma. This pretty much coincides with our thinking as expressed in my memorandum of August 1st to you under same subject.

Have you had any reaction from Philadelphia having to do with our suggestions of August 1st?

——, ——.

PCS/ep
attach.

[fol. 2487] Copy

Assistant Secretary of Defense
Washington 25, D.C.

(dated 8/9/60).

Dear Mr. Karr:

Your company and the other producers of ammonium perchlorate have indicated to various agencies of the Department of Defense your interest in obtaining information on the possible level of future military requirements for that material.

We have now completed a study of potential requirements that might arise if unilateral, long range future plans of each military department were actually carried into effect, and we are informing all of the producing companies about our general conclusions.

We have concluded that there are no predictable developments which would change the present situation of a substantial excess of capacity over requirements, for the next two or three years.

There is a possibility that within about four years there might be a fairly sharp increase in Department of Defense

annual requirements, and that our needs by Fiscal Year 1964 might possibly exceed, at least temporarily, the total annual production capacity of all current producers. There is no assurance, however, that such an increase in demand will occur, or would last more than a year or two if it does occur. If the prospect of such an increase should become firm, it probably would be possible to meet the problem by stockpiling some ammonium perchlorate in advance of FY 1964, rather than encouraging the provision of production facilities capable of meeting what could be a peak demand of relatively short duration. The question of whether stockpiling should be undertaken, and if so when, is entirely dependent upon progress of development efforts, size and composition of future forces, and the anticipated production capability of industry at the time future decisions are made. Taking all known factors into consideration at this time, it appears to us that for some time to come the capacity of the industry is likely to exceed our probable requirements.
[fol. 2488] It is, of course, to our advantage to have several reliable producers and to encourage competition. On the other hand, it obviously would be a disservice to you to create a false sense of optimism about our future needs.

Sincerely yours, /s/ Perkins McGuire, Asst. Secretary of Defense, (Supply and Logistics).

Mr. Errol H. Karr, Vice-President, Pennsalt Chemical Corp., 2901 Taylor Way, Tacoma, Washington.
DX 2

[fol. 2489] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 11

Extract from—Appropriations Committee Meeting No. 12
Date—December 23, 1958
Members Present—Messrs. Drake, LaLande and Willits
Others Present—Messrs. Collins, Land, Shanaman and Tuttle

B. PSW-086-P (Joint Chlorate and Perchlorate Expansion):

1. This request, as submitted, asked for $1,437,000 in fixed capital, broken down between the chlorate and perchlorate portions as follows:

Chlorate portion	$940,000
Perchlorate plant	497,000
	$1,437,000

Average annual earnings before taxes and return were estimated at $470,600. and 26.5% respectively.

Action Required

Submission of Perchlorate Project only. S12

2. During the discussion, the question was raised as to what the economics of a perchlorate expansion alone would be. It was decided to ask Mr. Shanaman to submit alternate estimates for the perchlorate expansion, assuming the chlorate requirements were, if necessary, purchased.

Renegotiation, T30

3. Mr. Drake also requested that the Tax Department check on the question of renegotiation. One plan is for Pennsalt to produce sodium perchlorate; sell this product to a joint venture (Pennsalt being one partner) and this joint venture to convert the sodium perchlorate to ammonium perchlorate, and

then sell the ammonium perchlorate to a government contractor.

The question to be resolved is what steps in this entire procedure, if any, would be subject to renegotiation.

[fol. 2490] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 12

Sodium Chlorate—Calvert City

I. Return based on current selling price:

Sales—12,000 tons @ $81.5/cwt		1,960,000
Less freight equalization @ $0.20/cwt		48,000
Net Sales		1,912,000
Manufacturing Cost @ $5.78/cwt	1,390,000	
Tank car expense @ $0.06/cwt	14,000	
Selling & Adm. @ 12% of Net Sales	228,000	
Total Cost		1,632,000
Gross Profit		280,000
Investment		
Fixed Capital	4,575,000	
Working Capital	275,000	
Total	4,850,000	
Pre-tax Return on $4,850,000		5.8%

II. Selling Price required to give 15% pre-tax return:

Total Investment	4,850,000
Gross Profit equal to 15% return	730,000
Gross Profit equal to 15% return $/cwt	$ 3.04/cwt
Manufacturing Cost	5.78
Tank Car Expense	0.06
Freight Equalization	0.20
Total before S. & A.	$ 9.08

Selling price = 9.08 + (.12 x selling price)
= 10.30/cwt.

gtc/r
8/23/56

[fol. 2491] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 13

Olin Mathieson Chemical Corporation

Date: March 26, 1957

To: B. H. Wojcik at Baltimore
From: W. C. Gardiner at Niagara
Subject: Sodium Chlorate from Soda Ash

Copy To: J. O. Logan,
B. H. Nicolaisen,
R. A. Turner,
A. J. Holmes,

Electrochemical Survey Report H-35.506 recently issued by Turner shows that chlorination of soda ash will produce chlorate with a Return of 35% on an Investment of $686,000 for 40 tons per day of sodium chlorate. This is the most economical way for us to get into the business and we are concentrating our efforts on this process.

At Saltville, 50% caustic soda from the cells is about the same cost as Decomposed Ash and cheaper than Light Ash. The process should probably be worked out so that any of the alkali raw materials could be used.

I want to point out that chlorate is less profitable than chlorine and caustic. The Return from producing chlorate by a chemical method assumes that the alakali and chlorine are products that can't be sold. The relative merits are shown in the attached table.

R.H.W. 3/28/51: W. C. Gardiner.

[fol. 2492] Comparison Between Selling Chlorine and Caustic Soda as Such or as Converted to Sodium Chlorate

	Sodium Chlorate	Chlorine	Caustic
Annual Production—tons	14,600	32,100	42,500
Selling Price—per ton	$ 161.80	$60.00	$55.00
Annual Sales	$2,350,000	$4,263,500	
Production Cost—per ton	$ 118.72	$26.00	$23.50
Annual Production Cost	$1,730,000	$1,835,000	
Sales and Administration—% of Sales	5	1	1
Sales and Administration—Annual	$ 117,000	$ 42,800	
Total Cost of Sales	$1,847,000	$1,877,800	
Operating Profit	$ 503,000	$2,385,700	
Tax at 52%	$ 261,000	$1,240,000	
Net Profit after Taxes	$ 242,000	$1,145,700	
Difference between Profit from Chlorate and Chlorine and Caustic		$ 903,700	

I am not familiar with similar prices for soda ash but I would guess that this difference would be cut in half.

[fol. 2493] In United States District Court

Defendants' Exhibit 14

Pennsalt Chemicals

Subject: Ammonium Perchlorate at Calvert City, Ky.—E-726

Date: January 17, 1958
To: Mr. G. R. Evans
From: W. L. Huntington
Copies To: W17

An order of magnitude estimate of the facilities required to prepare 6,000 tons annually of ammonium perchlorate has been prepared. The basis of the invested capital required is the cost estimate of the sodium perchlorate facilities prepared by the Portland office scaled down to the required size and a rough estimate of the cost of the ammonium perchlorate metathesis plant obtained from the "River Bank Project Report" with capacity and prices adjusted to the 1957 levels. A cross check of this latter cost was made against a price reported in December, 1955 Chemical Engi-

neering, page 334 for the "Wecco" Henderson Nev. installation.

Based upon a Pennsalt capital outlay of $3,530,000 plus $2,810,000 of borrowed capital, we can expect a return of $828,000 annually before taxes. This represents a 23.5% return on our portion of the investment. The selling price of ammonium perchlorate "propellant grade" is now about 32½¢/lb. and our packaged cost should be about 18.9¢/lb.

The raw material charged is sodium chlorate assumed available from a 25,000 ton/year plant @ 5.7832¢/lb. A charge of about 1¢/lb. has been made for the replacement costs of the platinum electrodes used in the sodium perchlorate step. Labor, utility and service rates used are those believed to be in effect after the perchloroethylene and hydrogen fluoride expansion facilities are in service. In addition, a profit of $46.34/ton has been charged against the sodium chlorate used in the production.

Wm. L. Huntington.

WLH/jem
Enclosures

[fol. 2494] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 15

Pennsalt Chemicals

Subject: E-726—Ammonium Perchlorate at Calvert City
Date: January 31, 1958
To: Mr. A. S. Woodard
From: G. R. Evans

Attached herewith is Mr. Huntington's exploratory analysis of subject proposal.

It was understood that the manufacture of ammonium perchlorate should be presumed to be an operation captive to the 25,000 ton per year sodium chlorate plant currently under consideration. On this basis, total capital requirements were estimated to be $6,340,000 of which $5,620,000 represents fixed capital.

To align this study with that previously submitted for sodium chlorate, one of the contained sheets contemplated

borrowing 50% of the total capital at 6% on a ten year amortization basis. This then requires Pennsalt to invest $3,170,000. A before-tax profit of $803,000 is realized, corresponding to a 25.3% return on the equity capital.

As a variant and in recognition of the current decline of interest rates, a second analysis assumed the borrowing of 50% of the fixed capital at 5% to be amortized over a period of ten years. This would require an equity investment of $3,530,000 to produce a before-tax profit of $828,000 on a return of 23.5%.

The return on investment is computed after deduction of the profit expectancy on the sodium chlorate consumed in this operation.

G.R.E.

GRE/jm
Enclosure

[fol. 2495] In United States District Court

Defendants' Exhibit 16

January 31, 1958.

Mr. C. W. Frost, Baltimore
J. O. Logan, Baltimore
Sodium Chlorate

W. A. King,
D. Richardson,
K. C. Frazier.

In view of the first order being in the works for shipment of chlorate to Crossett Paper Mills, it was confirmed to me today by Pennsalt that they will invoice us on the basis of the net at their Portland plant less 5%. We will invoice the customer and I would await receipt of the first invoice from Pennsalt before invoicing Crossett. If there is any question in connection with freight absorption, etc., please contact me before taking action.

J. O. Logan.

[fol. 2496] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 21

Inter-Office Memo

Olin Mathieson Chemical Corp.

Date: December 11, 1958.

To: Dr. B. H. Wojcik at Baltimore
From: W. C. Gardiner at Niagara Falls
Subject: Sodium Chlorate Plant Location
Copies To: Mr. B. H. Nicolaisen.

We obtained the latest freight schedules on sodium chlorate this week and estimated rail freight equalization from minimum point to 34 paper mill locations on a weighted basis.

Sodium Clorate Plant Location	Freight Equalization $/ton
Columbus, Miss.	5.90
McIntosh, Ala.	6.25
Saltville, Va.	7.80
Lake Charles, La.	9.55
Brunswick, Ga.	13.00
Burnside, La.	14.80
Omal, Ohio	20.30
Niagara Falls, N. Y	22.40

Current regulations prohibit bulk shipment of $NaClO_3$ in barges. Getting a statement on what would be involved to change this & time element.

BHW

It is obvious that Hooker has a preferred location. Being in the TVA power area gives Hooker and Ampot a still greater advantage.

We plotted the paper mill locations on a map with existing Olin Mathieson plants. Huntsville may be a better location than any considered previously. There may be even better locations at plants operated by other Divisions. We do not want to consider a "grass-roots" chlorate plant as the overhead would probably kill it. We are waiting for blank maps of the U. S. but, in the meantime, have used copies from the Olin Mathieson Chemical Corporation booklet (1957) and enclose a copy showing locations of the 34 paper mills in red and OMCC plants in black.

We have two questions:

1. Can Huntsville be considered as a sodium chlorate plant location since we are on arsenal property? If we had to locate away from the present site, then it would be practically a "grass-roots" plant.
2. Should we consider a chlorate plant at an existing Olin Mathieson plant operated by another Division?

If the answer to one or both of these questions is "yes," then we have to have local unit costs comparable to those supplied by John Koehn for Saltville and McIntosh. In addition, I will have to ask Traffic Department for further freight rates from the additional localities to the 34 paper mills. I attach a list of the unit costs needed.

W. C. Gardiner.

Write letter to power rate at—
Can we barge bulk chlorate?

E B question.

WCG:HM
Encl.

[fol. 2497] Please get the following unit costs, if available, for the Huntsville, Ala. plant.

Brine
Salt ($/ton)
Hydrochloric Acid
20° Be ($/T 100% HCl)
Steam ($/1000 lb.)
Bunker C Fuel Oil
Electricity (7,000,000 KWH/mo)$/KWH
Water, Well ($/1000 Gal.)
Water, River ($/1000 Gal.)
Labor-Operating ($/MH)
Labor-Operating ($/MH)
Labor-Repair ($/MH)
Overhead ($/yr. or % of Investment)
  Direct
  Indirect
  Taxes and Insurance
  Repair Overhead

WCG:HM
12/11/58

Huntsville would have to be a "grass roots" plant unless WCG is thinking about taking over the USI plant.

HWS.

[fol. 2498] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 22

April 14, 1959.

Mr. J. O. Logan, Baltimore
C. W. Frost, Baltimore

Tonnage of Sodium Chlorate Estimated to Be Moved During 1959 and 1960 and Beyond Under Our Present Sales Arrangement With Pennsalt

Mr. W. A. King,
Mr. K. C. Frazier,
Mr. O. J. Theobald, Jr.,
Mr. J. G. McMullen.

Referring to your memo of April 6, I have discussed the matter of Sodium Chlorate sales with the various District Managers involved and based on information obtained from them, I wish to submit estimated sales figures as follows:

Customer	Location	1959	1960	Next Several Years Per Year
International Paper Co.	All 6 Locations	0	1000 tons	1000 tons
Champion Paper & Fibre	Canton, N. C.	135 tons	135 tons	135 tons
Crossett Paper Co.	Crossett, Ark.	90 tons	90 tons	90 tons
Container Corp.	Brewton, Ala.	0 tons	180 tons	180 tons
Coosa River Newsprint	Coosa Pines, Ala.	90 tons	200 tons	200 tons
Brunswick Pulp	Brunswick, Ga.	1080 tons	1080 tons	1080 tons
Scott Paper Co.	Mobile, Ala.	135 tons	300 tons	300 tons
St. Marys Kraft	St. Marys, Ga.	45 tons	45 tons	45 tons
West Va. Pulp & Paper	Covington, Va.	45 tons	45 tons	45 tons
St. Regis Paper Co.	Pensacola, Fla.	0 tons	180 tons	180 tons
		1620	3255	

All of the District Managers report that with many accounts they have encountered situations which preclude the possibility of their putting on any real pressure to obtain Chlorate business. Some of these accounts are willing to give us Chlorate business, but only if we accept a smaller

tonnage of Chlorine and Caustic business than we are now getting.

A few accounts will not consider giving us business because of the location of the producing point, i.e., Portland, Oregon and they are not satisfied to accept our storage-in-transit arrangement at Lake Charles because that is still not the producing point.

Several accounts would give us a letter of intent to purchase Chlorate from us if we can definitely indicate that we will build a plant for the production of Chlorate which would give them a more favorable f.o.b. point than now exists.

Based on the foregoing, it would appear therefor, that we cannot expect any worthwhile expansion of Chlorate sales under our present sales arrangement with Pennsalt.

The picture, however, would be entirely different if OMCC alone or jointly with Pennsalt were to build a plant at a favorable location in the South or Southeast.

C. W. Frost.

[fol. 2499] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 23

Olin Mathieson Chemical Corporation
Mathieson Building
Baltimore 3, Maryland

John O. Logan

April 21, 1959.

Mr. L. M. Shanaman, Sales Manager
Heavy Chemicals Division
Pennsalt Chemicals Corporation
2901 Taylor Way
Tacoma 2, Washington

Dear Roy:

Several weeks ago Fred asked me to advise you of the probable sodium chlorate sales picture over the next several years. This subject has been thoroughly reviewed by all of our people active in promoting chlorate.

We have come to the conclusion that the tonnage moved

this year will approximate 1600-1800 tons. In 1960 we can envision 3200 tons of business and would anticipate that the volume would remain at this level for the next several years. We have the accounts making up this tonnage well in mind so that this is something more than just an intelligent guess.

The difficulties which prevent moving larger tonnage are probably recognized by you. They consist principally of the fact that we have no production but are merely selling your material and your production is located at a substantial distance from the market. Under these conditions, we find Purchasing people somewhat reluctant to build their volume with us.

I trust the above is the information Fred desired and if you have any specific questions about it, we will do our best to answer them.

Kind regards.

Very truly yours, John Logan.

JOL:rsm
Via Air Mail

[fol. 2500] In United States District Court

Defendants' Exhibit 24

Olin Mathieson Chemical Corporation

Date: May 1, 1959.

To: Mr. W. A. King at Baltimore
From: K. C. Frazier at Baltimore
Subject: Sodium Chlorate Plant

Copy To: Mr. J. O. Logan,
Dr. R. R. Shively,
Mr. C. M. Norton,
Mr. J. G. McMullen.

The sales group feel they do not have any justifiable reason for suggesting that we have a sodium chlorate plant at the present time. This is primarily due to the fact that we have a large unsatisfied demand in the products we now make.

It is felt that until such time as this demand is satisfied, we should not ask for money to diversify.

Enclosed is a letter from Mr. Theobald summarizing the reasons that were discussed in arriving at the above conclusions.

K. C. Frazier.

[fol. 2501] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 25

Olin Mathieson Chemical Corporation

Inter-Office Memo

Date: July 28, 1959.

To: Mr. W. A. King at Baltimore
From: R. R. Shively at Baltimore
Subject: Location of Sodium Chlorate Plant

We were asked to compare, for sales purposes, McIntosh, Ala. and Chattanooga, Tenn. as locations of a 15,000 ton sodium chlorate plant.

The principal difference between the two locations from a purely sales viewpoint would be the tonnage for which each creates a new, low f.o.b. point. McIntosh would be low freight producing point for customers using 17,350 tons per year. (1) Chattanooga would be low for customers using approximately 11,000 tons. (2)

Another consideration would be average equalization against existing production on shipments into the Southeast. Against Columbus, Miss., average equalization from McIntosh would be $1.40 per ton, from Chattanooga $1.80 per ton. (3)

The above factors are probably not significant in relation to a power cost difference of $11.80 per ton in favor of Chattanooga. (3)

It appears that the locations of the existing plants were carefully chosen by their operators to serve the Southeastern chlorate market. They are close together in the southern part of the TVA power network; they operate on

low cost power and are well located from a freight standpoint.

(1) "Chemical Division Capital Requirements", Page 18 and Exhibit 23, Page 44.
(2) Memo J. G. Chalfant to O. J. Theobald dated 9/11/58 attaching W. W. Northgraves' 1959 estimates chlorate consumption. Also discussion with M. E. Shoemaker, W. H. Brandt.
(3) "Economic Location of Sodium Chlorate Plant etc.", Electrochemical Survey Report H-35-510, April 17, 1959.

R. R. Shively.

RRS/bd

[fol. 2502] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 30

Pennsalt Chemicals

Confidential

Subject: Pennsalt-Olin Mathieson; Sodium Chlorate
Date: January 29, 1960
To: File
From: A. H. Clem
Copies To: D11 L9 L14 W1

I advised John Logan via telephone yesterday that we had completed our freight study on the sodium chlorate movement from Calvert City versus Chattanooga. Our findings indicate that if our sales were spread evenly among all potential customers in the pulp and paper field, Calvert City has a disadvantage on freight of approximately $1.80 per ton. For a 25,000 ton plant this would amount to $45,000 annually. The herbicide market has not been considered in this study. O-M has not yet completed their freight study but it is anticipated their figures will probably agree with ours.

I asked John if he would be free to see Cooper and me either today or Monday but unfortunately John is tied up both days. He told me he would excerpt the legal and fi-

nancial matters from the Sun-Olin letter of intent and forward them to me immediately. I should have this by Monday.

Other items we discussed were as follows:

1. Name—I think this is fairly well established as Penn-Olin. Whether it should be "Penn-Olin Corporation" or "Penn-Olin Chemicals Corporation" should be resolved.
2. Trademark—John proposes we give some thought to a trademark so that we can publish same as promptly as possible following the announcement.
3. Directors and Officers—In the Sun-Olin venture each company appointed four directors. In this particular case the President is from Sun and the Vice President is from Olin. Both the President and Vice President are members of the Board.
4. Cell—John again asked how we are progressing on the study of the Vickers Krebs cell versus our own cell. I told him we were working on this and hoped to have some information available by Thursday, February 4th, which is the date John suggested we meet to go over the various data available in preparation for the February 11th meeting.

[fol. 2503] 5. Power Cost—This should be readily available from Calvert City; John will obtain the Chattanooga figures.

6. Raw Material Cost (Salt)—These figures are, of course, available to us for Calvert City; John will obtain them for Chattanooga.

Early next week I will call John and set up a definite time and place for our Thursday, February 4th meeting. At this meeting he will probably have one of his technical people present to discuss the cell proposition with whomever we designate. We will also go over at that time the freight study and the other items mentioned above.

A. H. Clem.

AHC/eh

[fol. 2504] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 32

Olin Mathieson Chemical Corporation

Date: February 18, 1960.

To: Mr. Russell Hopkinson (3) at 460 Park Avenue
From: Mr. L. S. Howe at 460 Park Avenue
Subject: Pennolin Economics

Copy To: Mr. J. R. Sanderford.

In accordance with your verbal request of February 15, Bob Sanderford and I have reviewed the information available on PennOlin economics as contained in the J. Statz memorandum of February 10, 1960 and supporting data. In addition, the depreciation and tax calculations as used in the Cash Flow Table were checked by Mr. W. J. Hoefer.

Table I, attached, contains a brief summary of these economic data for the production of 10, 20 and 25 thousand tons of sodium chlorate. Since there are no detailed breakdowns of capital or production costs given, the summary figures given in the Statz report were accepted as is. Mr. Williamson's "Summary of Considerations Relative to Proposed Sodium Chlorate Project" dated February 3, 1960, indicated that the figures obtained from Pennsalt have been reviewed by our technical people and appear to be reasonable, accurate and on the conservative side.

From data in the literature, "Chemical Process Industries" by Shreve, independent economic estimates for the production of sodium chlorate were made, using the Pennsalt capital cost estimates in the absence of any other data. These economics are shown in Table II.

Comparing the Pennsalt and Shreve economics shows that the Pennsalt figures are more conservative, indicating a 7.8% return on investment for the 25,000 ton case versus a 9.7% return for the Shreve data. However, since even the optimistic (and less reliable) estimate has slightly under a 10% return on investment, it would be very desirable to obtain detailed breakdowns of capital and operating costs for further analysis.

L. S. Howe.

[fol. 2505]

Table I

Economics of Sodium Chlorate Production
(000 Omitted)

(Based on Pennsalt Data)

Production—Tons/Year	10,000	20,000	25,000
Investment			
Plant	4 094	5 645	6 185
Working Capital	379	629	776
Total	4 473	6 274	6 961
Sales			
Sodium Chlorate @ $161.80/Ton	1 618	3 236	4 045
Cost of Sales			
Materials			
Operation			
Overhead			
Depreciation (7%)	286	395	433
	1 259	2 075	2 428
	(125.90/T)	(103.75/T)	(97.12/T)
Corporate Expenses (12% Sales)	194	388	485
Total	1 453	2 463	2 913
Gross Profit	165	773	1 132
Net Profit (52% Tax)	79	371	543
% to Sales	4.9	11.5	13.4
Return on Investment %	1.8	5.9	7.8
Cash Flow	365	766	976
Payout Period—Years	12.3	8.2	7.1

LSH :2/18/60

[fol. 2506] Table II

Economics of Sodium Chlorate Production
(000 Omitted)

(Independent Estimate Based on Data in Literature)

Production—Tons Year.....	10,000	20,000	25,000	25,000
Investment (Penn Salt data)				
Plant	4 094	5 645	6 185	
Working Capital	379	629	776	
Total	4 473	6 274	6 961	
Sales				
Sodium Chlorate				
@ $161.80/Ton 161.20	1 618	3 236	4 045	4 030
Cost of Sales				
Materials	101	202	253	371
Operation	584	978	1 167	1 318
Overhead	263	304	299	171
Depreciation (7%)	286	395	433	357
	1 234	1 879	2 152	2 217
	(123.40/T)	(93.95/T)	(86.08/T)	(88.68)
Corporate Expenses (12%)	194	388	485	485
Total	1 428	2 267	2 637	2 702
Gross Profit	190	969	1 408	1 328
Net Profit (52% Tax).....	91	465	676	637
% to Sales	5.6	14.4	16.7	15.8
Return on Investment %...	2.0	7.4	9.7	9.2
Cash Flow	377	860	1 109	994
Payout Period—Years	11.9	7.3	6.3	7.0

LSH:2/18/60

[fol. 2507] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 33

Olin Mathieson Chemical Corporation

Date: March 8, 1960.

To: Mr. R. Hopkinson at 460 Park Avenue
From: H. J. Reed at 460 Park Avenue
Subject: Sodium Chlorate

I have looked over the file on the sodium chlorate project and discussed it a bit with Mr. Howe. I have the following preliminary comments:

1. The project appears marginal from strictly an earnings point of view as you have noted, and sensitive to volume because of the high capital cost of plant in relation to sales.
2. There is no support in the file for the capital estimate. I should like to see the detail and basis for the estimate and perhaps later to talk to the people who actually prepared it in order to get a feel as to its reliability.
3. In view of the marginal economics, it would seem desirable to locate the plant where maximum existing service facilities are already available—in other words to construct essentially a "battery limits" plant grafted on to either an Olin Mathieson or Pennsalt existing installation. I do not know the extent to which this has been anticipated in the capital estimate.
4. The product freight study of course gives only a partial answer relative to plant location. I would judge that the prime location factors are:

   Delivered cost of salt
   Cost of steam or fuel for steam generation
   Cost of power
   Freight on product

   These are essentially the same factors affecting location of caustic chlorine plants.

[fol. 2508] 5. The economic evaluation is at 100 percent capacity. This may be normal practice but it

would be useful to look at the break-even point. Historically at what level do our chemical plants operate?

6. Is there any possibility of adding a related product to the project in order to sweeten up the economics a bit?
7. In general I believe this project lends itself to rather precise pro forma analysis.

H. J. Reed.

HJR:CZ

[fol. 2509] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 36

April 25, 1960.

Mr. R. Hopkinson, 460 Park Ave.
C. L. Williamson, Baltimore
Sodium Chlorate Project

Mr. S. de J. Osborne,
Mr. E. Block,
Mr. D. W. Drummond,
Mr. W. F. Otterstrom,
Mr. J. E. Williams,
Mr. J. O. Logan.

4/27 RH called and said Stanley O. indicated he had not given EB the go ahead. I told him we would take another look when prelim. engineering was completed.—

On March 7, members of this division presented background information and economics relative to subject matter. To keep you informed, the following is submitted.

The joint venture corporation, Penn-Olin Chemical Company, has been formed and the Board of Directors and Officers are as follows:

Pennsalt

J. McWhirter—President
W. C. Willits—Treasurer
W. A. LaLande
A. H. Clem

Olin Mathieson

J. O. Logan—Vice President
C. L. Williamson—Secretary
J. G. Johns
J. L. Wood

The technology team comprised of two members from each parent company visited numerous plants in Europe, and have submitted their report which in essence recommends use of Pennsalt's cell with certain modifications. As a result of this group's efforts, it was concluded that the project was ready for preliminary engineering.

At the last board meeting of Penn-Olin and in keeping with the letter of intent, it was concluded that we should go forward with the preliminary engineering which is estimated to cost between $130,000 and $150,000.

As a result of the further information that has been obtained from further discussions with Pennsalt personnel as well as that from Vickers-Krebs and Pechiney, we are convinced that our financial data previously submitted is reasonably accurate and, if anything, is on the very conservative side.

A trip has been made to Calvert City to inspect the proposed location for the chlorate plant contiguous to Pennsalt's chlor-alkali installation. Arrangements will be made for the transfer of ten acres to Penn-Olin with an option on an additional ten acres contiguous thereto along with necessary easements, rights of way, etc. necessary or desirable to protect the future of Penn-Olin.

A preliminary discussion has taken place with Mr. Walter O'Connell and Pennsalt Treasurer, Mr. W. Cooper Willits, and no difficulty is anticipated in this area. At this time, we are starting to work on a feasibility report and will not be able to complete same, however, until the preliminary engineering work is completed on or about July 12.

It is anticipated that when we complete the feasibility report, you will be provided a copy for your files.

C. L. Williamson.

[fol. 2510] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 40

Penn-Olin Chemical Company

Estimated Earnings and Return on Investment

Revised July 27, 1960 to Include Resale Operations and Alternate Capitalization Plan

Attached herewith, to be used in conjunction with the schedules dated July 11, 1960, are a revised Summary of Sales and Earnings 1961-1971, and a revised schedule of Estimated Cash Generation for the same period.

The Summary of Sales and Earnings now includes the forecast results of resale operations for 1961, as well as the sale of 3,000 tons from plant operations previously included. As the resale operation is predicted to be a virtual break-even transaction, the inclusion has no material effect on the return on investment figures as computed on the basis of an operating division of a company, without regard to excess depreciation or interest on borrowed money. Such return may be computed as follows (10.25 year average):

Gross Investment	$7,429,000
Average Annual Earnings before Taxes	1,134,968
Average Annual Earnings after Taxes (before Interest Deduction)	539,110
Return on Investment before Taxes	15.28%
Return on Investment after Taxes	7.26%

The schedule of Estimated Cash Generation has been revised to include the current thinking on capitalization. This schedule assumes the investment of each parent company to be $1,000,000, with the balance of $6,000,000 furnished by outside sources at an interest rate of 5%, and being repaid at the rate of $800,000 per year beginning in mid-year 1962. As discussed at the recent Board Meeting, the schedule also shows dividends to the parent companies beginning in 1964.

R. J. Niederuter.

RJN/nmd
Enc.

[fol. 2511] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 41

Pennsalt Chemicals

Subject: Penn-Olin—Return on Investment
Date: August 16, 1960
To: Mr. J. McWhirter
From: A. S. Woodard
Copies To: L9—N22—W1

Because of the interest in knowing the influence of return on investment of current estimates of capital and manufacturing costs and the influence of eliminating the production and marketing of packaged chlorate in the proposed Penn-Olin plant, Mr. Wood and the writer reappraised these items in a meeting on August 15th. This re-examination of the proposed Penn-Olin chlorate plant shows a potential return on investment before taxes of 21% as compared to the previous estimate of 16.86%. Attached is a summary tabulation of the computations. We have listed below the principal factors which have changed this return.

Three factors cause this improvement: reduction in estimated fixed capital cost of the plant, reduction in the manufacturing cost, and increase in the capacity of the plant.

The reduction in the estimated fixed capital cost from $6,700,000 to $6,400,000 is the result of:

(a) More favorable bids on major electrical equipment than expected.

(b) Savings in the cost of construction now evident from the substantial additional engineering completed.

(c) Elimination of facilities for packaging and warehousing of packaged material.

Reduction in manufacturing cost is realized from:

(a) Reappraisal of the amount of chlorine required for pH control of the electrolyte with the conclusion that this requirement can be materially reduced.

(b) From the Sales' decision to eliminate packaging of the product which reduces Works' cost and yields increased profit on the 2500 tons per year chlorate previously planned to be marketed as packaged goods.

[fol. 2512] Finally, with further engineering completed, it is evident that the design of the plant results in a balance of facilities (electrical conversion equipment, electrolysis facilities, and process facilities) which gives an inherent capacity 6% greater than the arbitrary 25,000 tons per year capacity selected. Assuming that this capacity can be sold, more favorable total works' costs are realized and, thus, improved return on investment.

A. S. Woodard.

asw:jh
attach.

[fol. 2513] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 42

Olin Mathieson Chemical Corporation

Date: August 22, 1960.

To: Mr. S. de J. Osborne, Staff Coordinating Committee, CAR Committee at 460 Park Avenue
From: H. J. Reed at 460 Park Avenue
Subject: Revisions to Proposals of Penn Olin Chemical Co.

Copy To: Mr. E. Block,
Mr. J. Logan,
Mr. J. L. Wood.

This memorandum covers discussions in Philadelphia August 19th, 1960 between J. L. Wood of Chemicals Division, Al Woodard, Manager of Engineering for Pennsalt Chemicals Corporation, I. D. Ritson, Corporate Director of Construction, and the writer, with respect to the resubmission of the previously rejected proposal for the construction of a sodium chlorate plant at Calvert City, Kentucky.

The purpose of this meeting was to examine the basis on which the proposal has been resubmitted and to make certain that the parent companies were both looking at the same facts, opinions, and figures as a basis for discussion.

It became apparent, during this meeting, that the revisions described in memorandum from J. L. Wood to J. O. Logan of August 16th were not wholly accepted by Pennsalt. Further revisions indicated herein as of the date of this memorandum do, however, represent agreement with Pennsalt as represented by Mr. Woodard on August 19th.

The essential features of the revised proposal are individually described below:

I. Rerating of Plant Capacity to 26,500 Tons Annually

The proposed plant, with no additions, is now represented as having an annual capacity of 26,500 tons rather than 25,000 tons as originally reported.

This stems principally from the fact that the cells were previously rated at 8000 amperes and are now rerated at 8500 amperes.

Mr. Woodard stated, that, in the original estimate, he had provided for the installation of the necessary additional anodes to permit operation at 8500 amperes without increase in current density.

While the proposals for transformers and rectification equipment on which the original estimate was pre- [fol. 2514] pared was based on 8000 ampere cells and a nominal plant capacity of 25,000 tons annually, Mr. Woodard stated that he had received further proposals for like equipment carrying the higher rating which were within the limits of the original estimate, and which are still subject to downward negotiation. (It is generally recognized that electrical equipment of this type can usually be purchased at about 80% of the initial quotations. In the original estimate the cost of this equipment was entered at 85% of the quotations.)

In the process area outside of the cell room the plant design was stated by Mr. Woodard to be about 15-20% heavy in terms of original capacity and still 10-15%

heavy in terms of rerated capacity. (It is highly desirable that this portion of the plant have reserve capacity to permit uninterrupted cell room operation.) In response to a direct question, Mr. Woodard stated that, in his opinion and without qualification, the plant as presently conceived was capable of continuous operation at the rate of 26,500 tons per year. (A cell of the same construction proposed for Penn Olin has been operating successfully at up to 8000 amperes at Pennsalt's plant in Portland, Oregon.)

Mr. Wood is in agreement with the above opinions, both with respect to rerated plant capacity and ability to live within the original estimate on the rerated basis.

II. Design Changes

Mr. Wood reported that a sales decision has been made by OMCC Chemicals Division that all production was to move in bulk and no provision was to be made for installing drumming equipment. Mr. Woodard commented that, in Pennsalt's experience, the premium on drum shipments was inadequate to meet the actual incremental costs encountered. (On this basis it is apparent that a later installation of drumming facilities cannot be separately justified without increase in premium.)

The effect of this reduction in scope of work is to reduce the direct portion of the estimate by $109,000.

In Mr. Wood's memorandum of August 16th, a reduction in the capital estimate of $210,000 is shown as resulting from the substitution of evaporative crystallization for refrigerative crystallization.

[fol. 2515] It is apparent that this proposed cost reduction is premature at this time in the sense that Pennsalt has not yet accepted refrigerative crystallization, although recognizes its possible advantages and is actively investigating a possible change.

In his revised figures presented to Pennsalt management, Mr. Woodard has not taken credit for any capital

reduction in this respect, and it was agreed that OMCC should not take such credit at this time.

A small increase of $9,000 to correct for underestimated trackage facilities.

No other basic design changes are contemplated at this time.

In response to my direct question, Mr. Woodard stated that the reduction in capital estimate did not represent a reduction in quality of plant design or construction and that this was not a case of "gold plate" being removed.

III. Revisions to Capital Cost Estimate

A. Direct Costs

Mr. Woodard stated that United Engineers had prepared an independent estimate of the cost of the project using in some instances, proposals for equipment obtained directly in Pennsalt. In respect to labor and the balance of equipment and construction materials, however, United Engineers have used their own cost experience based on their construction of another plant (for a client other than Pennsalt) in the vicinity of Calvert City, Kentucky.

Mr. Woodard said that he had had two groups of Pennsalt engineers review the United Engineers' estimate, that both had criticized certain items as high or low, but that, on balance, Pennsalt had accepted the total of the direct costs estimated by United Engineers amounting to $5,260,000 as realistic.

The elimination of drumming facilities, with the add-back for trackage, has the effect of reducing the estimated direct cost to $5,160,000.

[fol. 2516] B. Indirect Costs

United Engineers was instructed, according to Mr. Woodard, to estimate the total job, including indirects, on a basis consistent with that which they

would be prepared to abide by if they were given an overall contract for the design and construction of the project. Mr. Woodard stated however, that he planned to use a local general contractor at Calvert City, who is to a degree captive, to execute the field work with Pennsalt staff at Calvert City in effect operating as construction managers. This contractor has been employed by Pennsalt at Calvert City for some years in like assignments, and for this project has offered to do the general and mechanical phases of the work for a fee of $50,000. He has also offered to guarantee the fee of his subcontractors (electrical, insulation, painting, etc.) at a total of $25,000 making the total construction fees $75,000.

The total fee (including an allocable part to engineering) contained in the United Engineers' estimate is $195,000. On the above basis, Mr. Woodard has reduced this item by $120,000 in the revised estimate. (In effect, Pennsalt is offering by this means to perform the construction management function for Penn-Olin at no fee, since the contractor is operating essentially as a labor contractor, and the engineering is to be handled by United Engineers with the allocable portion of the overall fee included as a cost of engineering.)

In addition, Mr. Woodard stated that Pennsalt had a substantial amount of construction equipment (including a crane) and tools on hand at Calvert City, and rather than sell them at this time at a fraction of their value, were willing to use them on the Penn-Olin project, and in addition that there was available at Calvert City temporary construction facilities which could be used on the Penn-Olin project. Furthermore he stated that his captive contractor had a preferential position in the local labor market and with local labor unions.

On this basis, Mr. Woodard stated that he had reduced by $80,000 the total United Engineers' estimate for indirect construction costs (comprising Engineering and Drafting, Job Supervision, Job Travel Expense, Job Office Expense, Purchasing

and Expediting Temporary Construction Facilities, Insurance, Taxes and Fringe Benefits, Construction Equipment and Tools, Job Accounting.

[fol. 2517] C. Contingency

The contingency amount of $310,000 estimated by United Engineers has remained unchanged in the revised estimate. Mr. Woodard conceded that this amount was low, and in fact was lower than the usual contingency used by Pennsalt in its own projects. He stated, however, that in his opinion the project was sufficiently defined at this time to justify this low contingency.

D. Recapitulation of Revised Capital Cost as of August 22, 1960

The revised capital estimate to be presented both to Pennsalt Chemical Corporation and Olin Mathieson Chemical Corporation is shown on the following page (comparisons with United Engineers' estimate shown for clarity).

IV. Revisions to Operating Costs

The pro forma operating costs, including incremental operating costs to the level of 26,500 tons annually were reestimated, and the figures contained in the revised economic evaluation under date of August 22, 1960 represent agreement between Mr. Wood and Mr. Woodard on this subject.

These revisions comprise the following items:

(1) A reduction in cost of chlorine of $27,000 per year based upon an estimated consumption of 40 pounds of chlorine per ton of product.

(2) An incremental cost of $84,000 annually representing all operating cost elements involved in an increase of production from 25,000 to 26,500 tons annually.

(3) A decrease in depreciation charges of $18,000 annually, representing reduced estimated investment.

(4) A decrease in the cost of containers (and packaging labor) amounting to $113,000 annually resulting from the elimination of drummed shipments.

[fol. 2518] Penn-Olin Chemical Corp.

Sodium Chlorate Plant-Calvert City, Ky.

	United Engineers 7-7-60	Penn-Olin 8-22-60
Rated Plant Capacity (T/Y)	25,000	26,500
Direct Construction Costs	5,260,000	5,160,000
Indirect Construction Costs	935,000	855,000
Contractor's Fee	195,000	75,000
Land	54,000	54,000
Contingency	310,000	310,000
Total Project Estimate	6,754,000	6,454,000

[fol. 2519] (5) An increase in the cost of annual tank car rental charges of $5,000 resulting from increased production, and an increase of general selling, administrative, and research expenses of $11,000, resulting from application of a 6% loading to incremental sales for these purposes.

V. Revised Economic Evaluation

On the following pages are the economic evaluation, revised as of August 21st, 1960 by Mr. Statz in accordance with the foregoing.

These figures are for the first year of operation at 100 percent of capacity, and reflect the revisions in estimates of both capital and operating costs previously cited.

[fol. 2520] Penn-Olin Chemical Company

Economic Evaluation
August 15-16, 1960

Particulars	PennOlin 1965 Eco. Eval.	Revised 8-22-60
Outlay to be recovered		
Gross outlay for new property to be capitalized	6,754,000	6,454,000
Less: Cash recovery on property to be sold	—	—
Net outlay for new property	6,754,000	6,454,000
Net outlay for new working capital	675,000	675,000
Outlay for expense portion of project	—	—
Moving, severance and other expenses	157,000	157,000
Federal income tax or credit at 52%	(82,000)	(82,000)
Net Outlay to be Recovered	7,504,000	7,204,000
Summary of Investment		
Gross property, plant and equipment	6,754,000	6,454,000
Less: Depreciation reserve	1,560,000	1,488,000
Net property, plant and equipment	5,194,000	4,966,000
Add: Working capital	675,000	675,000
Net Investment	5,869,000	5,641,000
Add back: Depreciation reserve	1,560,000	1,488,000
Gross Investment	7,429,000	7,129,000
Summary of Operations—Details on page 2		
Net Sales	4,007,000	4,190,000
Pre-tax Profit	1,252,000	1,493,000
% to net sales	31.2%	35.7%
Net Profit	601,000	717,000
% to net sales	15.0%	17.1%
% return on net investment	10.2%	12.7%
Percent Return on Gross Investment	8.1%	10.1%
Add Back: Depreciation	390,000	372,000
Cash Profit	991,000	1,089,000
Cash recovery rate	7.5 yrs.	6.6 yrs.

[fol. 2521] Penn-Olin Chemical Company

Economic Evaluation
August 15-16, 1960

Particulars	PennOlin 1965 Eco. Eval.	Revised 8-22-60
Net Sales	4,007,000	4,190,000
Product Cost		
Material	421,000	394,000
Steam	152,000	152,000
Electricity	768,000	768,000
Water	19,000	19,000
Labor	158,000	158,000
Supplies	23,000	23,000
Depreciation	390,000	372,000
Insurance	8,000	8,000
Taxes	18,000	18,000
Repairs	188,000	188,000
Overhead	160,000	160,000
Incremental Cost—Material and Power for 26,500 T/Y	—	84,000
Pennsalt General and Technical Service	52,000	52,000
Containers (and container labor)	113,000	—
Product Cost	2,470,000	2,396,000
Gross Profit	1,537,000	1,794,000
% to net sales	38.4%	42.8%
Expenses		
Shipping—Tank Car Rental	45,000	50,000
Advertising, Selling, Administrative, Research, State Taxes 6%	240,000	251,000
Expenses	285,000	301,000
% to net sales	7.1%	7.2%
Operating Profit	1,252,000	1,493,000
Pre-Tax Profit	1,252,000	1,493,000
% to net sales	31.2%	35.7%
Federal Taxes	651,000	776,000
Net Profit	601,000	717,000
% to net sales	15.0%	17.1%

[fol. 2522] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 45

Olin Mathieson Chemical Corporation

Date: November 9, 1960.

To: Mr. J. L. Pickens at Baltimore, Md.
From: George H. Nusloch, II at New Orleans, La.
Subject: Sodium Chlorate, New Orleans Territory

Copy To: J. G. McMullen,
J. M. Naughton,
W. A. Stone.

The following is a brief summary of consumers in the New Orleans territory:

International Paper Company—It is understood that Messrs. Drummond and Johns were able to conclude negotiations for ⅓ of the total tonnage in the Southern Kraft Division for 1961. Their total consumption is estimated at approximately 15,000 tons.

Crossett Paper Company—Consumption is estimated at 1400 tons per year supplied by Hooker and Solvay (shipped by American Potash). My efforts in obtaining a position for 1961 to date are not encouraging, but a visit with Mr. J. C. Hair, General Manager, is scheduled for November 11, 1960, in the company of W. W. Northgraves. Report on that call will follow. Promised a couple of cars.

Gulf States Paper Corporation, Demopolis, Alabama—Estimated consumption 1400/1500 tons and we are optimistic of getting a position in 1961. Our obstacles are

1. We are supplying 70% of barge liquid caustic soda and a little over 80% of chlorine to this mill.
2. Purchasing of chlorate is being handled by the Demopolis mill personnel and not by the head Purchasing Agent in Tuscaloosa.

Caustic and Chlorine is handled by Tuscaloosa purchasing office. Currently we believe that we can expect about 300 tons in 1961.

Ought to have 500T or more.

Container Corporation of America—We estimate chlorate consumption at 2,000 tons per year. Whereas we received mild encouragement on the local level, it has been emphasized that the central purchasing office in Chicago will have to approve changes in the present supplier. We feel certain that the Brewton people will recommend us for a small portion in 1961.

Marathon Division American Can—Estimated consumption 1200 tons per year. We were informed that contracts for chemicals of this nature are being more and more controlled by the Menasha, Wisc. office and we have notified our Chicago office of this situation. The local purchasing agent stated that he personally did not feel the need of another supplier, but that if Solvay is no longer going to represent American Potash, the door might be open for us to pick up that tonnage since there was no obligation to American Potash.

Crown Zellerbach Corporation, Bogalusa Division—Estimated consumption 300 tons per year. O. J. Theobald and I were turned down for a position in 1961 due to the fact that their consumption is so very low at the present. Since we were also pressing for caustic, chlorine, and ash business and were successful, we took the position that we best wait until their consumption grows to more significant quantities. This is not expected to take place in 1961.

[fol. 2523] *Scott Paper Company*—It is hard to accurately estimate 1961 requirements because of the expansion which is anticipated on stream during the second quarter 1961. The minimum tonnage of 1500 seems logical. We have a reasonably firm commitment that our 1961 participation will be greater than 1960. We are hoping that this will be as much as 400 tons.

St. Regis Paper Company—Estimated consumption 750 tons. New York office has primary responsibility for

this account, but we will be happy to help out with our local contacts in any way possible.

General:

The following are reactions which we have noted from our calls:

1. Hooker enjoys an excellent reputation for delivery, dependability, and Technical Service.
2. Consistent reluctance to place major tonnage for shipment from the West Coast.
3. No serious problems regarding inadequate storage facilities, inefficient unloading practices or faulty equipment from the present supplier.
4. We get the impression consistently that some small business will be placed with us in 1961, but we will not be a major supplier until our production is on stream.

Further developments will be reported,

Very truly yours, George H. Nusloch, II.

[fol. 2524] IN UNITED STATES DISTRICT COURT

DEFENDANTS' EXHIBIT 49

Plaintiff's Answers To Interrogatories

1 - 4 (Set II)

1. Has plaintiff or anyone acting on behalf of plaintiff obtained a written or oral report, statement, memorandum, data, information or testimony relating to this litigation or to plaintiff's investigation preceding this litigation from any past or present director, officer, employee or agent of any of the following (except defendants herein):

a. Any past or present competitor of any of defendants;
b. Any past or present purchaser of any product from, customer of, or distributor for any of defendants;
c. Any producer or seller of chemicals;
d. Any past or present producer, distributor, user, buyer

or seller of sodium chlorate, sodium chlorite, chlorine dioxide, ammonium perchlorate, potassium chlorate, chlorine, caustic soda, ammonia, hydrofluoric acid, calcium hypochlorite, muriatic acid or sulphuric acid;

e. Arthur D. Little, Inc.; or

f. Any market research, chemical research, research and development, equipment manufacturing, transportation, construction or engineering firm, or public or private carrier.

2. Has plaintiff or anyone acting on behalf of plaintiff obtained a written or oral report, statement, memorandum, data, information or testimony relating to this litigation or to plaintiff's investigations preceding this litigation from anyone other than the persons listed in Interrogatory 1 above (except defendants herein).

3. Has plaintiff or anyone acting on behalf of plaintiff in connection with this litigation interviewed or obtained a written or oral report, statement, memorandum, data, information or testimony relating to this litigation or to plaintiff's investigation preceding this litigation from any former director, officer or employee of any of defendants.

[fol. 2525] 4. As to each statement, interview, report, memorandum, data, information or testimony referred to in Interrogatories 1 and 3 above, state:

a. The name, business address and position of each person from whom it was obtained;

b. The name, business address and position of each person who obtained it;

c. The date on which it was obtained; and

d. Its present location.

1-4. Plaintiff has obtained information from numerous persons falling within one or more of the categories specified in items 1-3 of defendants' interrogatories. Plaintiff's informants and the nature of the information received are set forth below.

a. Letters to the Assistant Attorney General, Antitrust Division, were received from the following companies and are available for inspection upon request at Room 3414, Department of Justice, Washington, D. C.:

J. T. Baker Chemical Co.
Berkshire Chemical, Inc.

Chipman Chemical Co.
Globe Chemical Co.
Goldwynne Chemicals Corp.
Charles Hardy, Inc.
Harshaw Chemical Co.
International Selling Corp.
[fol, 2526] Kraft Chemical Co.
Pacific Engineering and Production Co.
Philipp Brothers Chemicals, Inc.
Reade Manufacturing Co.
E. M. Sergeant Pulp & Chemical Co.
Weyerhaeuser Company

b. Interviews by agents of the Federal Bureau of Investigation, at the direction and under the supervision of counsel for the plaintiff, were conducted with the following companies and individuals on the dates shown:

(1) Pittsburgh Plate Glass Co.
1 Gateway Center
Pittsburgh, Pennsylvania
By Cyrus V. Anderson, Associate General Counsel

June 12 and 26, 1961

(2) Allied Chemical Corporation
61 Broadway
New York, N. Y.
By L. A. Coleman, General Counsel

June 19, 1961

(3) Wyandotte Chemicals Corp.
1609 Biddle
Wyandotte, Michigan
By William R. Day, Secretary and General Counsel, and George F. Sharrard, Director, Marketing Research Department

June 12, 1961

(4) Virginia Chemical & Smelting Co.
West Norfolk, Virginia
By A. K. Scribner, President

June 12, 1961

(5) Arthur D. Little, Inc.
30 Federal Street
Boston, Massachusetts
By William H. Gulliver, attorney

June 13, 20, 22, 1961

[fol. 2527] (6) Russell W. Sloan
1135 South Wilson Drive
Lake Forest, Illinois

June 13, 1961

(7) Fred C. Shanaman, Sr.
26 Country Club Drive
Tacoma, Washington

June 30, 1961

Reports of interviews with the foregoing persons are not subject to production under any discovery rule. Documents furnished to the plaintiff by Allied Chemical Corporation, Virginia Chemical & Smelting Co. and Arthur D. Little are available for inspection upon request at Room 3414, Department of Justice. A document furnished by Wyandotte Chemicals Corp. on a confidential basis is available, by consent of William R. Day, Secretary and General Counsel, for inspection by defendants' counsel only.

c. Interviews of and correspondence with Hooker Chemical Corporation, 666 Fifth Avenue, New York, N. Y. (Ansley Wilcox 2d, Vice-President and General Counsel) and American Potash & Chemical Corporation, 3000 West Sixth Street, Los Angeles 54, California (Robert B. Coons and R. J. Heller, Vice-Presidents) were had between October 1960 and August 1961. The interview reports are not subject to production under any discovery rule. Documents submitted to the plaintiff by Hooker and American Potash were furnished on a confidential basis upon the understanding that no disclosure would be made outside the Department of Justice except pursuant to court order. Conferences have [fol. 2528] been arranged by defendants to be held on October 10, 1961 between counsel for all parties and representatives of American Potash and Hooker for the purpose of determining the extent to which those companies will

consent to examination and use of their documents. The American Potash and Hooker documents will be available for inspection at Room 3414, Department of Justice, upon consent of those companies or order of the court.

d. In addition, plaintiff has received information relating generally to sodium chlorate, ammonium perchlorate and miscellaneous subjects from clipping files of the Department of Commerce, files of the Tariff Commission, various personnel of the Departments of Commerce and Defense, and numerous issues of the Wall Street Journal, The New York Times, Chemical Week, the Oil, Paint & Drug Reporter, and other publications. The notes and reports made by plaintiff's counsel and staff from examination of these miscellaneous sources of information are not subject to production under any discovery rule.

[fol. 2529] [File endorsement omitted.]

[fol. 2530] IN UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Civil Action No. 2282

UNITED STATES OF AMERICA, Plaintiff

v.

PENN-OLIN CHEMICAL COMPANY, OLIN MATHIESON CHEMICAL CORPORATION AND PENNSALT CHEMICALS CORPORATION, Defendants.

OPINION—May 1, 1963

Alexander Greenfeld, Esquire, and Leonard G. Hagner, Esquire, District of Delaware, Wilmington, Delaware; Daniel J. Freed, Esquire, and Edward A. Copley, Esquire, Justice Department, Antitrust Division, Washington, D. C., attorneys for United States of America.

William S. Potter, Esquire (Berl, Potter & Anderson), Wilmington, Delaware, for all defendants; H. Francis De-

Lone, Esquire, and John T. Subak, Esquire (Dechert, Price & Rhoads), Philadelphia, Pennsylvania, attorneys for Pennsalt Chemicals Corporation; Albert R. Connelly, Esquire and John W. Barnum, Esquire (Cravath, Swaine & Moore), New York City, attorneys for Olin Mathieson Chemical Corporation.

[fol. 2531] The Government has brought a civil action against Penn-Olin Chemical Company (Penn-Olin), Olin Mathieson Chemical Corporation (Olin), and Pennsalt Chemicals Corporation (Pennsalt), in which it seeks to prevent and restrain them from allegedly continuing to violate Section 1 of the Sherman Act, 15 U.S.C. § 1, and Section 7 of the Clayton Act, 15 U.S.C. § 18.[1]

[fol. 2532] The primary attack of the Government is

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[1] Section 1 of the Sherman Act provides in pertinent part:

> "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several states . . . is declared to be illegal."

Section 7 of the Clayton Act reads in pertinent part:

> "No corporation engaged in commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no corporation subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or any part of the assets of another corporation engaged also in commerce, where in any line of commerce in any section of the country, the effect of such acquisition may be substantially to lessen competition, or to tend to create a monopoly.
>
> . . . . . .
>
> "This section shall not apply to corporations purchasing such stock solely for investment and not using the same by voting or otherwise to bring about, or in attempting to bring about, the substantial lessening of competition. Nor shall anything contained in this section prevent a corporation engaged in commerce from causing the formation of subsidiary corporations

directed against a joint venture between Pennsalt and Olin, pursuant to which they jointly organized and have controlled Penn-Olin for the purpose of having it construct a plant at Calvert City, Kentucky to produce and sell sodium chlorate. The Government charges that the effect of the joint venture and of the action of the parties thereunder may be to substantially lessen competition and tend to create a monopoly not only in sodium chlorate, but also in other non-chlorate chemicals, in violation of Section 1 of the Sherman Act and Section 7 of the Clayton Act. By an amendment to its complaint the Government has also charged that agreements between Pennsalt and Olin entered into in December 1957 and February 1958, denominated, respectively, the "sales agreement" and the "production agreement", restrain trade and commerce in sodium chlorate in violation of Section 1 of the Sherman Act.

Jurisdiction

The Court has jurisdiction over the person of each defendant, and by virtue of Section 15 of the Clayton Act, 15 U.S.C. § 25, and Section 4 of the Sherman Act, 15 U.S.C. § 4, it has jurisdiction over the subject matter of the action.

[fol. 2533]

The Defendants

Pennsalt is a Pennsylvania corporation with its principal place of business in Philadelphia, Pennsylvania. It is a chemical company engaged in the production and sale of about 400 chemicals and chemical products, at fifteen plants located in eleven states as follows:

Alabama	Ohio
California	Oregon
Georgia	Pennsylvania (2 plants)
Illinois	Texas (3 plants)
Kentucky (2 plants)	Washington
Michigan	

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for the actual carrying on of their immediate lawful business, or the natural and legitimate branches or extensions thereof, or from owning and holding all or a part of the stock of such subsidiary corporations, when the effect of such formation is not to substantially lessen competition."

Pennsalt's nationwide sales operations are conducted from its headquarters in Philadelphia and from 18 regional offices located in 13 states as follows:

Alabama	Ohio (2 offices)
California (3 offices)	Oregon
Georgia	Pennsylvania
Illinois (2 offices)	Texas (2 offices)
Michigan	Washington
Missouri	Wisconsin
New York	

Pennsalt has been engaged in the chemical business for over 110 years. In 1960 its sales amounted to over $90,000,000 on which it earned almost $5,000,000. During the same year, its assets were approximately $90,000,000. Since 1958 it has been engaged in a $55,000,000 capital investment program for the modernization and expansion of existing facilities and the construction of new ones.

[fol. 2534] Olin is a corporation organized under the laws of Virginia with its principal place of business in New York City, It is a diversified industrial corporation. The Chemical Division is one of seven operating divisions, and accounts for approximately 30% of the corporation's operating revenues. Olin's Chemicals Division produces a great number and variety of chemicals and chemical products from plants located in 15 states as follows:

Alabama	Mississippi
Arizona	Nebraska
Arkansas	New York
Georgia	North Carolina
Illinois	Pennsylvania
Kentucky	Texas
Louisiana	Virginia
Maryland	

Olin was formed in 1954 by the merger of Olin Industries, Inc., and Mathieson Chemical Corporation. Olin's activity in the chemical business reaches back, through its predecessor, Mathieson Chemical Corporation, to 1892. In 1960 Olin had sales of $690,000,000, on which it earned a net profit of $35,000,000. Its assets during that year amounted

to $860,000,000. During 1960 its capital expenditures were almost $49,000,000. Net sales of its chemical division in 1960 amounted to $217,000,000.

Penn-Olin is a Delaware corporation which was organized on February 25, 1960 by Olin and Pennsalt pursuant to [fol. 2535] a joint venture agreement between them dated February 11, 1960. Pennsalt and Olin each own one-half of Penn-Olin's capital stock. The officers of Penn-Olin are divided equally between officers of Pennsalt and officers of Olin. The board of directors of Penn-Olin is comprised equally of representatives of Pennsalt and those of Olin. Penn-Olin has no officers, directors or employees who are not concurrently employed by either Pennsalt or Olin. Penn-Olin constructed a plant at Calvert City, Kentucky at a cost of $6,454,000, for the production of 26,500 tons of sodium chlorate per year. It commenced production on September 1, 1961. By agreements executed in October 1961, dated as of January 2, 1961, Pennsalt undertook to operate the Penn-Olin plant and Olin agreed to sell its output.

All of the defendants are engaged in interstate commerce.

The Asserted Illegality of the Joint Venture

The Government claims that each of the defendants was engaged in interstate commerce at the time when Pennsalt and Olin acquired the stock of Penn-Olin, that the acquisition of such stock was tantamount to an indirect acquisition by Pennsalt and Olin of the assets of the other at a [fol. 2536] time when each was subject to the jurisdiction of the Federal Trade Commission, and that the joint venture and the actions taken thereunder may result in a substantial lessening of competition in one or more sections of the country, or tend to create a monopoly, in sodium chlorate and *and* other non-chlorate chemicals. For these reasons it is charged that Section 7 of the Clayton Act has been violated. The Government also charges that regardless of whether the joint venture involved an acquisition of stock or assets banned by Section 7 of the Clayton Act, it nevertheless constituted a combination in restraint of trade in violation of Section 1 of the Sherman Act.

The defendants deny the anticompetitive or monopolistic

effect of the joint venture and assert that competition in the manufacture and sale of sodium chlorate has been increased by Penn-Olin entering the field. Defendants also contend that Section 7 of the Clayton Act is without application because, defendants say, Penn-Olin was not engaged in commerce when its stock was acquired by Olin and Pennsalt, and neither Olin nor Pennsalt acquired any interest in the assets of the other when they acquired Penn-Olin stock.[2]

[fol. 2537] The last defense will not be discussed since, for the reasons hereafter stated, the joint venture did not have the anticompetitive effect at which Section 7 was aimed. The Sherman Act challenge will also be disregarded, for the anticompetitive standard imposed by Section 7 of the Clayton Act is less stringent than that of the Sherman Act. *Brown Shoe Co.* v. *United States*, 370 U.S. 294, 329 (1962).

Broadly speaking, the Section 7 issues to be resolved are whether the effect of the joint venture:

1. May be to substantially lessen competition or tend to create a monopoly;
2. In any section of the country;
3. In any line of commerce.

These questions will be discussed in inverse order:

The Relevant Lines of Commerce

The parties agree that two "line[s] of commerce" within the meaning of Section 7 of the Clayton Act are relevant

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[2] Defendants also argue that if these contentions are rejected, Penn-Olin must be regarded as a subsidiary of Olin and Pennsalt formed to carry on a lawful extension of their business, within the contemplation of the third paragraph of Sec-7 of the Clayton Act (the second paragraph of the Act quoted in footnote 1). Hence, it is argued that defendants have violated Section 7 only if the effect of Penn-Olin's organization "is" and not "may be" substantially to lessen competition. It is unnecessary to consider this point in view of the determination that the joint venture probably will not adversely affect competition.

to this case: sodium chlorate, and of the non-chlorates, calcium hypochlorite.[3]

[fol. 2538] Sodium Chlorate

Sodium chlorate is a white crystalline chemical. It is produced commercially by the electrolysis of an acidified solution of salt (sodium chloride). The process is closely akin to that used in the commercial production of chlorine and caustic soda. Sodium chlorate of like purity is a fungible commodity. Any which is produced for sale by a domestic producer is reasonably interchangeable with that of any other domestic producer.

In 1960 over 91,000 tons of sodium chlorate, valued at close to $18,000,000, were produced in the United States. The domestic production of sodium chlorate has increased greatly within the last ten years. From 1950-1955, the domestic production of sodium chlorate more than doubled, rising from 22,085 tons in 1950 to 46,972 tons in 1955. From 1950-1960, the production of sodium chlorate more than quadrupled, rising from 22,085 tons in 1950 to 91,900 tons in 1960.

In 1960, over 54,600 tons of sodium chlorate were produced east of the Rockies and 37,300 tons produced west. At the prevailing prices (9 cents per pound in the east and

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[3] The parties have stipulated: Olin and Pennsalt each produce and sell in commerce in the United States the following non-chlorates: ammonia, calcium hypochlorite, caustic soda, chlorine, hydrochloric acid, hydrofluoric acid and sulphuric acid. Competition, if any, in the sale of hydrochloric acid and sulphuric acid is *de minimus*. Olin and Pennsalt compete in the sale of the remaining five chemicals. Of these, calcium hydrochlorite has been selected as a "guinea pig" to determine whether the joint venture constitutes a violation of the antitrust laws in the case of non-chlorate chemicals. The presence or absence of substantial competition between Olin and Pennsalt with respect to the production and sale of ammonia, caustic soda, chlorine, and hydrofluoric acid or of the existence of any relevant market for such chemicals, is not relevant to the determination of any issue in the case.

[fol. 2539] 10½ cents per pound in the west), eastern production was valued at over $9.8 million while western production amounted to $7.8 million.

The largest consumer of sodium chlorate is the pulp and paper industry. That industry uses sodium chlorate in the bleaching of pulp for brighter, higher quality paper. The pulp and paper manufacturers use sodium chlorate as a principal raw material to generate chlorine dioxide, a gaseous material which possesses the unique ability to bleach cellulose fibers to a maximum whiteness with little or no loss of fiber strength. In 1958 70,541 tons of sodium chlorate were used commercially in the United States. Of this, 29,000 tons, or 41.1%, were used in pulp and paper bleaching. The next largest amount, 16,100 tons, or 22.8%, was used for herbicides (weed control). In 1960, the national shipments amounted to 81,928 tons of which 52,415, or 64%, were for pulp and paper mill consumption. Of the 47,036 tons shipped into the southeast in 1960, 39,563 tons, or 84%, were consumed by pulp and paper mills.

The recent growth of the sodium chlorate market is largely due to the adoption and rapid expansion of chlorine dioxide bleaching in the pulp industry.

In addition to its use by the pulp and paper industry, sodium chlorate is also used in agricultural chemicals [fol. 2540] (herbicides and defoliants) and in the production of ammonium perchlorate and other derivatives.

Since 1953 and prior to Penn-Olin, three producing companies, or their predecessors, have constituted the sodium chlorate industry in the United States: Hooker Chemical Corporation (Hooker), American Potash & Chemical Corporation (AmPot), and Pennsalt. Imports of sodium chlorate, stipulated to have been not substantial, have been as follows:

1956	892 tons
1957	335 tons
1958	1,322 tons
1959	2,596 tons
1960	4,152 tons

Hooker is the largest producer and seller of sodium chlorate in the United States. In 1956 Hooker acquired Oldbury Electro Chemical Company (Oldbury) which had produced sodium chlorate at Niagara Falls, New York since

about 1900 and which, in 1954, had constructed a plant in Columbus, Mississippi to meet the growing demand for sodium chlorate in the southeast. At the time when Oldbury constructed its Columbus plant, it had no other facilities or activities at or near Columbus. The capacity of Hooker's Columbus plant was increased in 1956, 1958 and 1960; the capacity of the Niagara Falls plant was decreased in 1961. The capacity of Hooker's two plants has been as follows:

[fol. 2541]

	Niagara Falls	Columbus
1957	12,000 tons	17,435 tons
1958	12,000 tons	21,340 tons
1959	12,000 tons	29,150 tons
1960	18,000 tons	32,000 tons
1961	14,000 tons	32,000 tons

In 1960 Hooker had assets of $187,000,000 and net sales of $150,000,000.

AmPot is the second largest producer and seller of sodium chlorate in the United States. It entered the business in November 1955 by acquiring Western Electro Chemical Company (Western). The latter had a single plant at Henderson, Nevada, where it had produced sodium chlorate since 1941. In February 1957 AmPot authorized construction of a sodium chlorate plant at Aberdeen, Mississippi to meet the growing demand in the southeast, and to compete effectively in that market with Hooker's Columbus, Mississippi plant. AmPot has twice expanded the capacity of the original Aberdeen plant. The capacity of the two AmPot plants has been as follows:

	Henderson	Aberdeen
1957	27,000 tons	—
1958	27,000 tons	—
1959	27,000 tons	12,000 tons
1960	27,000 tons	15,000 tons
1961	28,000 tons	22,500 tons

In 1959 the total assets of AmPot were $73,000,000 and its net sales in that year were $50,500,000. AmPot uses the Solvay Process Division of Allied Chemical and Dye Corporation (Allied Chemical) as its sales agent for sales [fol. 2542] of sodium chlorate to the pulp and paper and textile industries. Allied Chemical is a leading producer and seller of chemicals in the United States. Allied Chem-

ical uses its large sales force and large technical service facilities and the Solvay process for generating chlorine dioxide in selling sodium chlorate produced by AmPot. In 1960 Allied Chemical had assets of $801,000,000 and sales and operating revenues of $766,000,000.

When AmPot's sodium chlorate plant at Aberdeen went on stream, Solvay was almost entirely responsible for selling the output of that plant. Today, the direct selling of the Aberdeen sodium chlorate output is largely AmPot's responsibility. AmPot contributes approximately 70% of the direct selling effort.

The percentages of sodium chlorate sales made by Hooker and AmPot in 1960 were as follows:

	U.S.	East of Rockies	Southeast
Hooker	45.9%	54.6%	49.6%
American Potash	35.6%	37.9%	41.7%
Totals	81.5%	92.5%	91.3%

Pennsalt has produced sodium chlorate at Portland, Oregon since 1941 which it has sold principally west of the Rockies. The following tabulation sets forth its initial productive capacity at Portland and its expansion of that [fol. 2543] plant to date:

	Tons Per Year
October 1941	2,194
October 1942	3,448
January 1943	4,248
December 1949	5,448
February 1954	7,848
October 1957	12,392
October 1959	15,392

Until the early 1950's Pennsalt's sales of sodium chlorate were principally for herbicidal use and virtually no sales were made to pulp and paper mills. At that time Solvay, which was selling sodium chlorate produced by AmPot, began offering its chlorine dioxide process to the pulp and paper industry conditioned upon the user purchasing its sodium chlorate requirements exclusively from Solvay. This led Pennsalt, in mid-1953, to enter into an agreement with Mathieson under which Pennsalt was permitted to install the Mathieson process in all the paper mills in the north-

west.[4] After this occurred, Solvay was never again successful in putting in its process in the northwest, and by 1960 Pennsalt had attained 100% of the sodium chlorate business of the western pulp and paper industry.

In July 1961 a fourth company, Pittsburgh Plate Glass Company (PPG), announced that it would construct a [fol. 2544] 15,000 ton per year sodium chlorate plant at Lake Charles, Louisiana. PPG is a large, diversified industrial corporation which produces and sells chemicals through its Chemical Division, formerly a subsidiary company, Columbia Southern. PPG has large technical service, sales, market research, and laboratory forces already serving the southeastern pulp and paper industry. In 1960 PPG had total assets of $625,000,000 and net sales of $628,000,000.

A fifth company, Pacific Engineering & Production Company of Nevada (Pacific), with the aid of a loan of $2,400,000 from American Cyanamid Company, is constructing at Henderson, Nevada a sodium chlorate plant with a capacity of 5,000 tons per year to commence production late in 1962. For its loan American Cyanamid received a promissory note of Pacific secured by deed of trust on all of Pacific's assets, an option to receive license on Pacific's processes, and an option to acquire all the assets of Pacific or 50% of its common stock. American Cyanamid is a leading producer and seller of chemicals in the United States.

Olin has never manufactured sodium chlorate for sale or been an independent seller of it. For years, however, it and its predecessor Mathieson has manufactured sodium chlorite which was sold to pulp and paper mills. The sodium chlorite, when dissolved in an acid solution by the mills, generated chlorine dioxide which the mills used as a bleach-[fol. 2545] ing agent for the pulp.[5] The raw material used

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[4] See footnote 5.

[5] As a result of research which Mathieson did in chlorine dioxide, it developed the so-called Mathieson process for generating chlorine dioxide to bleach pulp without damaging the fibers. The process was designed to sell sodium chlorite as a new commercial chemical.

While the process of releasing chlorine dioxide from

in the manufacture of sodium chlorite is sodium chlorate. In the early 1930's Mathieson produced sodium chlorate chemically for its own use in manufacturing sodium chlorite. During the late 1930's it stopped manufacturing sodium chlorate and turned to buying it. Approximately 5,000 tons of sodium chlorite are sold in the United States annually. Olin is the only domestic producer and 1960 was its best year.

Calcium Hypochlorite

Calcium hypochlorite, like sodium chlorate, is used in the production of pulp and paper. There are three important competitors in calcium hypochlorite: Olin, Pennsalt, and PPG.

In 1959 Pennsalt and Olin together accounted for $6,480,000 sales, or 88.8% of all calcium hypochlorite sold in the [fol. 2546] United States. Their respective market shares were:

Olin	62.4%
Pennsalt	26.4%

In 1960 Pennsalt and Olin accounted for 76.6% of the $6,900,000 sales of calcium hypochlorite throughout the United States. Ninety-nine percent of each company's sales were made in 43 states where both sold the product.

The competition between Olin and Pennsalt in the sale of calcium hypochlorite is substantial.

The Relevant Market

Section 7 of the Clayton Act is aimed at a substantial lessening of competition in "any section of the country", or as

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sodium chlorite is relatively easy and inexpensive compared to the generation of chlorine dioxide from sodium chlorate, in large scale production there is a three to one cost advantage in bleaching with chlorine dioxide made from chlorate instead of chlorite. This led Olin to realize that sodium chlorate would soon become the raw material for the process. In the early 1950's therefore Olin began to make its chlorine dioxide generation process available free to pulp and paper industry.

the statute is frequently paraphrased, in any relevant market. Whether a given transaction may substantially lessen competition depends upon its probable effect in a relevant market. *Tampa Electric Co.* v. *Nashville Coal Co.*, 365 U.S. 320, 329 (1961). The delineation of a relevant market is therefore a necessary predicate for determining the anti-competitive effect of any transaction challenged under Section 7. *Brown Shoe Co.* v. *United States, supra*, p. 335.

Calcium Hypochlorite

In calcium hypochlorite the parties agree that the national market is the relevant one.

[fol. 2547] Sodium Chlorate

The parties likewise agree that there is a relevant southeastern market in sodium chlorate, and although they define this market somewhat differently, the difference is not significant.[6]

But here agreement ends. The Government claims that there are two other relevant markets: the national market and the eastern market.

The national market, as the name implies, embraces the entire continental United States, except Alaska. The finding of a national market is important in the Government's view because it is said to put Pennsalt, Olin and Penn-Olin in the same area, to establish that Pennsalt and Olin should have been actual competitors, as a matter of law, at the time of Penn-Olin's creation, and to determine that Pennsalt and Penn-Olin were actual competitors, as a matter of

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[6] The Government asserts that the southeastern market includes Alabama, Arkansas, Florida, Georgia, Kansas, Kentucky, Louisiana, Mississippi, Missouri, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia and West Virginia. Defendants say that Kansas, Missouri and West Texas should be excluded. According to the Government, the exclusion of these two and one-half states makes scant difference. Consequently, in the following discussion Kansas and Missouri will be excluded, but the whole of Texas will be included. No evidence warrants splitting Texas and much of the evidence bearing upon competition treats it as an entity.

law, following Penn-Olin's creation. Defendants deny that a national market exists.

[fol. 2548] The eastern market is defined as the entire United States east of the Continental Divide. It excluded only the states lying west of the Rocky Mountains, viz, Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington and Wyoming. Defendants say that the statistical analysis of the competitive effect of Penn-Olin is the same regardless of whether the eastern or southeastern market is deemed to be relevant, and that it is immaterial whether there is a relevant eastern market. This position, asserted both in defendants' brief and at the argument, was not controverted by the Government. It has made no effort to show a difference, significant in antitrust law, between the competition effect of the challenged transactions in the so-called eastern as against the southeastern market. The Court does not therefore feel called upon to make an independent analysis of the problem. So the issue is the narrow one whether the southeast is the only relevant market, or whether there is a relevant nationwide market as well.

A market is relevant in determining whether a given transaction may substantially lessen competition only if it is an area of effective competition. *Standard Oil Co.* v. *United States*, 337 U.S. 293, 300, n. 5 (1949); *United States* v. *Maryland Virginia Milk Producers Ass'n.*, 167 F.Supp. 799, 802 (D. D.C. 1958), aff'd 362 U.S. 458 (1960). The two [fol. 2549] terms—area of effective competition and relevant market—are synonymous. *Tampa Electric Co.* v. *Nashville Coal Co.*, *supra*, p. 328.

Whether a geographic location is or is not an area of effective competition in a given case is a question of fact. Congress prescribed a pragmatic, factual approach to the definition of the relevant market and not a formal legalistic one. The geographic market in which the anticompetitive effect of a transaction is to be tested must both correspond to the commercial realities of the industry and be economically significant. *Brown Shoe Co.* v. *United States*, *supra*, pp. 336-337 (1962). It can be defined only in the light of the overall objectives of Section 7 and with particular recognition that it is being defined for the purpose of determining the reasonable probability of substantially lessening

competition. *United States* v. *Bethlehem Steel Corp.*, 168 F.Supp. 576, 588 (S.D.N.Y. 1958).

When Pennsalt and Olin entered into the joint venture, there were only three companies in the United States which produced sodium chlorate for sale commercially: Hooker, AmPot and Pennsalt. Pennsalt had only one plant. It was on the west coast at Portland, Oregon. Hooker had two plants, both in the east. One was at Niagara Falls, New York, and the other at Columbus, Mississippi. AmPot had two plants—one in the east at Aberdeen, Mississippi, and [fol. 2550] the other in the west at Henderson, Nevada. The Mississippi installations of AmPot and Hooker were both in the southeastern market.

The southeastern market was the one in which there was the heaviest concentration of sodium chlorate buyers.[7] Of the buyers, the pulp and paper mills were far and away the largest.[8] Plants having almost half of the national sodium chlorate productive capacity were also located in the southeast.[9]

After the southeast, the largest concentration of buyers and the largest productive capacity were in the 11 states west of the Rocky Mountains.[10]

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[7] Out of 82,094.70 tons shipped in 1960 within the United States, 47,035.76, or 57.3%, went to the southeastern market. Of the remainder, 18,152.72 tons, or 22.2% were shipped west of the Rockies, and the balance of 16,906.22, or 20.5%, went elsewhere.

[8] In 1960, of the 47,035.76 tons of sodium chlorate shipped to southeastern buyers, 39,562.83 tons, or 84.1%, were purchased by the pulp and paper industry. The amount so purchased represented 75.5% of the 52,415.03 tons purchased by all of the pulp and paper mills in the United States.

[9] As against the 1960 national productive capacity of 107,434 tons, plants having a tonnage capacity of 47,000 tons were in the southeast, viz, Hooker at Columbus, Mississippi with 32,000 tons, and AmPot at Aberdeen, Mississippi with 15,000 tons. The capacity of the latter was increased to 22,500 in December 1960.

[10] See footnote 7 as to buyer concentration. The productive capacity of the Pennsalt plant at Portland was 15,434

[fol. 2551] In 1960, therefore, the two most important markets in the United States, both from the standpoint of consumption and production, were first, the southeastern market, and second, the western market. Of foremost importance in determining whether there was a nationwide relevant market is the question whether western shippers could compete effectively in the southeast, and southeastern producers could compete effectively in the 11 western states. Unless they could, there was no relevant national market.

Normally of vital importance to competitive effectiveness are quality, price and service. So far as appears, neither AmPot, Hooker or Pennsalt enjoyed any advantage over the other in the quality of its product. From the standpoint of both price and service, Pennsalt was at a decided disadvantage, as against AmPot and Hooker, in supplying buyers in the southeast.

Pennsalt's price disadvantage resulted from the cost of transportation which it had to bear. To be competitive in the southeast, Pennsalt was faced with the necessity of absorbing the difference between the freight from its Portland plant and the buyer, and the freight between the buyer and the closest southeastern supplier. The freight disadvantage to AmPot in shipping a ton of sodium chlorate into the southeastern market from Henderson, Nevada as against shipping it from Aberdeen, Mississippi was ap-[fol. 2552] proximately $25 to $30 a ton. This represented about 15% of the delivered price of $163 a ton. The freight disadvantage to Pennsalt was even greater.

A competitive price disadvantage arising from transportation costs is an important factor in determining the scope of a relevant market. *United States* v. *Columbia Steel Co.*, 334 U.S. 495 (1948), reh. den. 334 U.S. 862 (1948); *American Crystal Sugar Co.* v. *Cuban-American Sugar Co.*, 152 F.Supp. 387, 398 (S.D.N.Y. 1957), aff'd 259 F.2d 524 (2d Cir. 1958); *Erie Sand & Gravel Co.* v. *F.T.C.*, 291 F.2d 279, 281-282 (3d Cir. 1961). The record fails to suggest that Pennsalt was in a position to surmount or equalize its

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tons and that of AmPot at Henderson was 27,000 tons, making a total of 42,434 tons, as against the total national productive capacity of 107,434 tons.

freight disadvantage because of lower operational costs, or otherwise.

Remoteness from southeastern buyers also placed Pennsalt at a service disadvantage. To pulp and paper manufacturers prompt delivery is a matter of importance. Delivery time for a shipment from Mississippi to the southeastern market is normally two to four days. Shipments from the northwest take ten to fourteen days. The chances of shipping delays increase as the distance between supplier and customer becomes greater. When Olin was acting as selling agent for Pennsalt under the December 1957 contract, Olin encountered buyer resistance because Pennsalt's production was located at a substantial distance from the market.

[fol. 2553] In addition, a buyer wants an assured source of supply. A remote seller such as Pennsalt who is called upon to absorb substantial freight costs cannot be viewed as a stable source of supply. It will, in all likelihood, favor buyers in its own vicinity whenever the supply situation becomes tight. This would appear to be particularly true in the case of Pennsalt since for many years both the bulk price and the drum price of sodium chlorate has been higher west of the Rockies than east of the Rockies. This price differential of about 15%, coupled with the freight equalization with which Pennsalt is burdened, would, in times of short supply, naturally cause Pennsalt to favor west coast purchasers at the expense of buyers in the southeast. The proximity of productive facilities in terms of the availability to a buyer of service and supply is also important in the delineation of a relevant market. *Crown Zellerbach Corp.* v. *F.T.C.*, 296 F.2d 800, 817 (9th Cir. 1961), cert. den. 370 U.S. 937 (1962). See also *Tampa Electric Co.* v. *Nashville Coal Co.*, *supra*, pp. 331-333.

The disadvantages inherent in the distance of Pennsalt's plant from southeastern buyers prevented Pennsalt from effectively competing against suppliers with plants in that area. To Pennsalt, the southeast was not a "natural locus of distribution". *American Crystal Sugar Co.* v. *Cuban-*
[fol. 2554] *American Sugar Co.*, *supra*, p. 398. Pennsalt's proximity to pulp and paper manufacturers in the northwest made that market the natural distributional area for it. In

1960 Pennsalt supplied 100% of the sodium chlorate bought by pulp and paper manufacturers in the northwest.

The Government answers that Pennsalt's competitive handicaps are theoretical only. It argues that despite Pennsalt's natural, freight, or other burdens, it has hurdled all obstacles, and by its actual shipments across country has demonstrated its ability to effectively compete in the southeast. Theory, the Government says, is of little consequence as against the facts. *United States* v. *Bethlehem Steel Corp.*, *supra*, pp. 592, 599.

The Government points out that in 1960 Pennsalt shipped across country 4,877 tons of sodium chlorate, or 32% of its total shipments of 15,362 tons. The key factor which enabled Pennsalt to do this is said to have been the substantial excess of eastern demand over production.

Despite the Government's assertion of a substantial imbalance between supply and demand in the "eastern" market, none existed in the southeast. The total shipments of sodium chlorate to the southeast during 1960 was 47,035.76 tons. The total capacity of the southeastern plants was 47,000 tons; Hooker at Columbus, 32,000 tons; AmPot at [fol. 2555] Aberdeen, 15,000 tons. In 1960 the southeastern market was not a deficit area.[11]

In 1960 Pennsalt shipped into the southeastern market 4,186 tons, or 27% of its total shipments of 15,195 tons. Of these shipments, 3,203 tons were sold by Olin as agent for Pennsalt under their sales contract of December 1957.[12] Olin had long-standing contacts with many buyers as a result of other chemicals sold to them and enjoyed a unique good will because of having made the Mathieson process available without charge. The arrangement between Pennsalt and Olin was only temporary, and Pennsalt was losing $80,000 a year on the sales which Olin was making. Pennsalt's shipments of 3,203 tons in fulfillment of sales generated by Olin were of a special non-recurring kind. They

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[11] The supply situation was to be further improved in December 1960 when AmPot's capacity at Aberdeen was increased by 7,500 tons. This brought the total capacity of AmPot and Hooker in Mississippi up to 54,500 tons.

[12] This is discussed in detail at p. 60 et seq of this opinion.

cannot be considered as indicative of Pennsalt's effectiveness as an independent competitor in the southeast.

Apart from the 3,203 tons sold by Olin, Pennsalt shipped only 983 tons of sodium chlorate into the southeastern market.[13] The total shipments of sodium chlorate into the [fol. 2556] southeastern market in 1960 for all purposes was 47,035.76 tons. Of this, Hooker shipped 23,263.52 tons, or 49%, and AmPot shipped 19,586.24 tons, or 42%. Pennsalt's shipments of 3,203 tons under the sales agreement with Olin were 7%. The shipments which Pennsalt made in satisfaction of its own sales were 2%.

Furthermore, of the 983 tons shipped to the southeast by Pennsalt, independently of Olin, only 458.40 tons went to pulp and paper manufacturers.[14] This was 1% of the total tonnage of 39,562.83 which was shipped to the southeastern pulp and paper manufacturers in 1960. It compares with 18,127.71 tons, or 46%, shipped by Hooker, 17,556.72 tons, or 44%, shipped by AmPot, and 3,420 tons, or 9%, sold by Olin for Pennsalt.

In 1960 shipments of 7,472.93 tons of sodium chlorate were made to buyers, other than pulp and paper mills, in the southeast. The sales agreement which Pennsalt had with Olin left Pennsalt free to compete for this business. It succeeded in obtaining 525 tons, or about 7%.

Both in theory and in fact Pennsalt was not an effective competitor in the southeast.

[fol. 2557] In furtherance of its national market claim,

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[13] Of this amount, 363.5 tons went to Buckeye Cellulose Company, a subsidiary of Procter & Gamble. Since Buckeye owned its own freight cars which were used to transport the sodium chlorate from Portland to Florida, the railroad made an allowance to Buckeye covering the cost of returning the cars to the point of origin. This circumstance, which gave Buckeye a unique advantage in receiving shipments from the west coast, coupled with the fact that Procter & Gamble was an important customer for other products of Pennsalt, are the reasons why Pennsalt had the Buckeye account.

[14] This is 94.9 tons more than the 363.5 tons that went to Buckeye, the Pennsalt reserved account. It represents shipments to two other southeastern pulp and paper mills.

the Government points out that in 1960 AmPot shipped across country 8,808 tons of sodium chlorate from its Henderson, Nevada plant, or 64% of its total shipments of 13,767.82 tons from that plant. Of these "across country" shipments, 7,237 tons, or 52.6%, of the shipments from Henderson went into the southeast. But at the time AmPot's Aberdeen plant, with a productive capacity of 15,000 tons, was unable to take care of the total tonnage of 19,586.24 tons which AmPot supplied to southeastern buyers. In contrast, AmPot's Henderson capacity of 27,000 tons far exceeded the 9,586.55 tons demanded by AmPot's customers in areas outside the southeast. This dual imbalance between supply and demand at AmPot's two plants was intracorporate and temporary. It was rectified in December 1960 when AmPot increased its capacity at Aberdeen by 7,500 tons. It was AmPot's intention to satisfy the requirements of its customers in the southeast out of this [fol. 2558] increased capacity at Aberdeen and not from Henderson.[15] So that such shipments as AmPot made into the southeast from Henderson are not significant in determining whether a western shipper can effectively compete for business in the southeast.

So far as shipments from the southeast to the west are concerned, in 1960 AmPot made no shipment from its Aberdeen plant to buyers west of the Rockies.

Hooker's situation with respect to east-west shipments was different. Although in 1960 Hooker made no shipments to the west coast from its Niagara Falls plant, it shipped 2,708.35 tons from its Columbus plant to customers west of the Rockies. This was 14.9% of the 18,152.72 tons shipped into the area. It compares with 10,485 tons, or 57.8% shipped by Pennsalt from Portland and 4,959.37 tons, or 27.3% shipped by AmPot from Henderson. The 2,708.35 tons which Hooker shipped to buyers in the west represented 7% of the 37,559.91 tons which Hooker shipped from both Niagara Falls and Columbus.

At the time Hooker had excess productive capacity of

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[15] It could hardly be expected to do otherwise since the freight disadvantage in shipping from Henderson to the southeast, as against shipping from Aberdeen, was $25 to $30 a ton, or something in excess of 15% of the bulk sales price of $163 in the southeastern market.

magnitude. As against a total of 50,000 tons (Niagara [fol. 2559] Falls 18,000 tons, Columbus 32,000 tons) it shipped to all markets east of the Rockies only 34,851.6 tons, or 70% of its available capacity. Tonnage shipped from the Columbus plant to all markets east of the Rockies amounted to 26,478.23 tons leaving that plant with 5,521.77 tons at Columbus, or 20.9% of the plant capacity, to be disposed of. It was out of this excess that the 2,708.35 tons were supplied to the west. Of this, 1,920.65, or about ⅔, went to a single buyer, U. S. Borax Co., for herbicidal use.

The total shipments of AmPot and Hooker from their eastern facilities were 52,964.88 tons; viz:

Hooker Shipments Columbus and Niagara Falls	37,559.91
AmPot shipments Aberdeen	15,404.97
Total	52,964.88

Of this, the 2,708 tons which Hooker shipped to the west coast from its excess capacity at its Columbus plant, amounted to 5%. The east-west shipments by Hooker in 1960 were undoubtedly the result of a desire to keep its plants operating as close to capacity as possible when eastern buyers were not available.

Here, there is no indication that an imbalance between supply and demand, either nationally or locally, had been the industry norm over a period of years or that it will be in the future. This circumstance makes irrelevant *United States* v. *Bethlehem Steel Company, supra*, which held that in determining the relevance of a market, freight costs were [fol. 2560] only a marginal factor when an industry-wide imbalance between supply and demand had persisted through the years and reflected an industry pattern (pp. 598-599).

In sum, neither Pennsalt nor AmPot could compete effectively from their western plants for business in the southeast where the highest concentration of buyers was located. Nor could AmPot or Hooker, the two companies having eastern facilities, effectively compete for business on the west coast. In each case the competitive limitation was due to market remoteness. There was no national market for sodium chlorate in 1960 relevant to an ascertainment of the competitive impact of the joint venture.

The Effect of the Joint Venture on Competition in Sodium Chlorate

On the competition issue, the initial position of the Government is novel and far reaching. It contends that Pennsalt and Olin *could* have competed with each other since each was as financially able and otherwise competent to compete on an individual basis as other sodium manufacturers which were doing so. In these circumstances, it is said that the antitrust laws required Pennsalt and Olin to compete individually or to stay out of business.[16] Their [fol. 2561] attempt to compete jointly, through the medium of Penn-Olin, because of a desire for greater profitability and risk limitation, is therefore said to be violative of Section 7.

The Government thus lays aside as immaterial any consideration of whether, but for Penn-Olin, Pennsalt and Olin *would* have entered the market as individual competitors, or what the competitive *affect* of Penn-Olin may be in the light of relevant economic factors. Instead, it would substitute a conclusive presumption that *any* combination specified in Section 7 between companies having the overall capability to go into business alone has a pernicious effect [fol. 2562] on competition and lacks any redeeming virtue;

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[16] The Post Trial Brief of the Government states (p. 1):

> "This case involves a joint venture between two companies that could have competed."

The same brief states at p. 2:

> "The fundamental issue posed by the trial of this case is whether the anti-trust laws condemn the entry of competitors into business together when, except for subjective preferences based on profitability and risk, each could have done so alone."

The Government's reply brief states (p. 30):

> "When competitors and potential competitors have comparable resources and face similar hurdles, the anti-trust laws require that they meet these challenges on individual terms or not at all. They may compete or not as they please. But the option to compete or combine is forbidden."

it would make *any* such combination illegal *per se*. No precedent supports the Government's position and its lack of logic condemns it. Compare *United States* v. *E. I. Du-Pont de Nemours & Co.*, 118 F.Supp. 41, 219-220 (D. Del. 1953), aff'd 351 U.S. 377 (1956) which held that under the Sherman Act it is not illegal *per se* for actual competitors to combine by means of a joint venture, but that a determination of the unreasonableness of the restraint is essential to its illegality.

The real issue is whether, based upon relevant economic factors, the formation of Penn-Olin has resulted, or as a reasonable probability will result, in a substantial lessening of competition or tend to create a monopoly in sodium chlorate in the southeastern part of the United States.

Prior to the joint venture, Olin had never produced sodium chlorate for sale in any market area or during any period of time. Nor had it ever sold sodium chlorate except for the limited time when it acted as sales agent for Pennsalt under the December 1957 contract. It had never purchased for its own use sodium chlorate from Pennsalt. On the other hand, Pennsalt had been manufacturing and selling sodium chlorate since 1941 from its plant at Portland, Oregon. Its shipments into the southeastern market were competitively not substantial.

The creation of Penn-Olin did not represent a combination of companies which were competing in the manufacture and sale of sodium chlorate in the southeastern market or elsewhere. Nor did it represent a combination of companies [fol. 2563] standing in the relationship of supplier and customer in the southeastern market or elsewhere.[17] It was neither a vertical combination or a horizontal combination.[18]

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[17] Olin purchased sodium chlorate to use as a raw material in manufacturing sodium chlorite at its Niagara Falls plant. This sodium chlorate was purchased from Hooker's neighboring Niagara Falls plant. Pennsalt from its Portland plant could not have competed successfully with Hooker for Olin's business.

[18] When the arrangement is between companies standing in a supplier-customer relationship it is characterized as vertical; when between companies performing similar

Contrasted with these anticompetitive relationships which are frequently the subject of antitrust condemnation, the arrangement between Olin and Pennsalt was *sui generis*.

When Section 7 was amended in 1950 Congress was apprehensive of the rising tide of economic concentration as a dynamic force which it believed posed serious threats to the free enterprise system. One of the basic purposes of the 1950 amendment was to arrest in their incipiency combinations resulting in the concentration of power which would probably have the effect of jeopardizing to a substantial extent competition. *Brown Shoe Co.* v. *United States, supra,* pp. 315, 317.

The creation of Penn-Olin was not the typical case of one competitor menacing an industry by increasing its competitive power through the acquisition of another competitor. Penn-Olin was not the instrumentality through which two competitors sought to enlarge their economic power. [fol. 2564] Pennsalt and Olin were not competitors. Pennsalt was a company which had experience in the manufacture and sale of sodium chlorate in the far west. Olin was a company which had contacts of value with prospective customers in the southeast. Penn-Olin was the means by which the strength of the two companies was joined—not for the purpose of further pre-empting a market which they already occupied, but to break into a market to challenge the supremacy of two companies which were dominating it.

Those companies were Hooker and AmPot. In 1960 Hooker supplied 49.5% and AmPot furnished 41.6% of the requirements of buyers in the southeast. Pennsalt's share, independent of the quantity sold by Olin as its sales agent, was 2.1% and including Olin's sales, was 8.9%.

As for productive capacity, Pennsalt nationally was the smallest of the three companies. In 1960, Hooker had 50,000 tons, or 46.5%, AmPot 42,000 tons, or 39.1%, and Pennsalt 15,434 tons, or 14.4%. In the southeastern market, Hooker's plant at Columbus, Mississippi had a capacity of 32,000 tons, or 68%, of the total capacity in that market, and AmPot's 15,000 ton plant at Aberdeen possessed the remaining 32%. Pennsalt had no plant in the southeast.

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functions in the production or sale of comparable goods or services, it is said to be horizontal. *Brown Shoe Co.* v. *United States, supra,* pp. 323, 334.

When Penn-Olin goes on stream it can reasonably be expected to have an immediate effect on competitive condi- [fol. 2565] tions which theretofore existed. Thereafter, it is not to be supposed that Pennsalt will continue to make shipments to the southeast. What it otherwise might have supplied from Portland will be shipped by Penn-Olin from Calvert City. As an independent competitor in the southeast, Pennsalt will probably be finished. But the elimination of Pennsalt does not mean that competition will be substantially lessened within the intendment of Congress. Whether a combination described in Section 7 will have the anticompetitive effect forbidden by the Act, cannot be ascertained merely by looking at its effect upon the competitive activities of the combining companies. The critical determination is whether the combination substantially lessens competition *generally* in an economically significant market. *Brown Shoe Co.* v. *United States, supra,* p. 335. Pennsalt occupied only a relatively insignificant competitive position in the southeast. As will be later shown, the competitive benefits which derive from Penn-Olin entering the market far exceed any competitive loss resulting from Pennsalt's probable elimination.

The Government asserts that another immediate effect of the joint venture will be to make Olin a captive buyer of sodium chlorate from Penn-Olin and to deprive other suppliers of obtaining any of Olin's business. For some [fol. 2566] years Olin has been buying sodium chlorate at its Niagara Falls plant to use in the manufacture of sodium chlorate. Its requirements have been supplied by Hooker from its Niagara Falls plant.[19] While Olin's 50% ownership of Penn-Olin does not legally deprive Olin of the right to continue to buy from Hooker or anyone else, self-interest

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[19] Hooker's shipments to Olin have been as follows:

Year	Tons
1957	1,300
1958	1,100
1959	1,300
1960	1,350
1961 (6 mos.)	560

Larger quantities of sodium chlorate sold in the United States, but produced outside of the United States, from 1958 to 1960, have been stipulated not to be substantial.

might lead Olin to buy from Penn-Olin. But it cannot be said that as a matter of reasonable probability Olin will do so. Whether purchasing from Penn-Olin will be to Olin's *net* advantage depends upon a balancing of the advantage which will accrue to Olin as a stockholder of Penn-Olin as against freight and service disadvantages inherent in shipments from Calvert City instead of a "next door" supplier. The record gives no indication how Olin will evaluate these conflicting considerations. In any event, however disadvantaged other suppliers may be in seeking Olin's business, it will not diminish competition for business in the southeast.

The primary attack of the Government is not directed to the alleged adverse *affect* of the joint venture on existing competition, but against its *affect* upon various aspects of potential competition.

[fol. 2567] The Government argues that the financial resources of defendants, as compared with those of Hooker and AmPot, are so great as to give Penn-Olin competitive advantages that will ultimately lead to market domination by it. This contention is based largely upon the proposition that the defendants, because of their size, will be able to use their combined buying power as a basis for making reciprocal arrangements with vendors who are sodium chlorate buyers, which will give Penn-Olin an undue sales advantage over its competitors.

Pennsalt is an acknowledged practitioner of reciprocity and uses purchasing-marketing coordination to further its sales efforts. Whether this is also the policy of Olin is more questionable. The record does not disclose whether Hooker and AmPot have or will endeavor to capitalize on their buying power to further their sales position. But in any event, whatever advantage Penn-Olin might be able to obtain through reciprocal arrangements because of the combined size of the defendants scarcely warrants the conclusion that as a matter of reasonable probability Penn-Olin will ultimately dominate the sodium chlorate market.

AmPot and Hooker are both multi-million dollar companies with established positions in the southeastern market. Neither is apt to be at a competitive disadvantage simply because of defendants' size. Thus far, neither has [fol. 2568] shown any disposition to lessen its competitive

efforts because of confrontation by Penn-Olin. On the contrary, both have attempted to make themselves more formidable as business rivals. Prior to Penn-Olin, the capacity of the Hooker plant at Columbus was 29,150 tons. Since Penn-Olin, the capacity has been increased to 32,000 tons. After Penn-Olin's plan to build a plant at Calvert City became known, Hooker employed a new salesman who was a specialist in pulp and paper sales, and installed a pulp and paper research laboratory for its customers. It offered its customers five-year contracts guaranteeing them a firm price during the contract period. It also proposed to increase its selling efforts generally. These actions were due in part at least to the increased competition expected from Penn-Olin.

Similarly with AmPot. After AmPot learned of the joint venture it proceeded to expand the capacity of its Aberdeen plant from 12,000 to 22,500 tons, and began to offer five-year contracts to its customers guaranteeing them a fixed price for five years.

The determination in 1961 of PPG to enter the southeastern market makes the likelihood of market domination by Penn-Olin even more remote. PPG plans to construct a sodium chlorate plant at Lake Charles, Louisiana with an intended ultimate capacity of 15,000 tons. It is a company [fol. 2569] which in 1960 had assets of $625,000,000 and sales of $628,000,000. From the standpoint of size it is capable of competing effectively with Penn-Olin or anyone else. The Government's forecast that Penn-Olin will uproot Hooker and AmPot from their entrenched positions and ultimately become the dominant factor in the southeast is based on conjecture and nothing more.

The Government further asserts that the size of the Calvert City plant will probably deter other companies from entering the southeastern market, when otherwise they might have done so. The Government points out that Penn-Olin's 26,500 ton plant was the largest ever built at one time in the United States, and that previously almost all plants at the outset went in the 2,000-15,000 range. By the time Penn-Olin was ready to build, the demand for sodium chlorate in the southeast had increased dramatically. The size of its plant was not out of line with competitors' plants then in existence or imminently in prospect.

The *in terrorem* significance which the Government attributes to the disparity between the size of Penn-Olin's plant and those initially constructed by others under conditions which then prevailed, is not warranted.

Such evidence as there is should allay any fear that Penn-Olin, either because of the size of its plant or the [fol. 2570] combined resources of the defendants, will have any exclusionary effect upon potential entrants having antitrust relevance. When PPG announced its decision to build at Lake Charles, Louisiana, it knew of Penn-Olin's intention to build at Calvert City. Prospective competition from Penn-Olin did not cause PPG to alter its plans. It is true that PPG made its decision after the present suit was begun. It cannot be supposed, however, that PPG's decision was made upon the basis of so hazardous a judgment that Penn-Olin would be eliminated or rendered substantially less effective competitively by a judgment in the Government's favor. It is more reasonable to conclude that PPG acted because an appraisal of market conditions convinced it that regardless of the outcome of the present litigation, additional sodium chlorate capacity was needed in the southeast and that after its plant was built, it would be able to obtain a fair share of the market for itself.

The Government points out that "rumor" indicated that the idea of building in the southeast occurred to the Solvay Division of Allied Chemical Corporation, Wyandotte Chemicals, and Virginia Smelting Company, but that none had done so. Penn-Olin is said to be the reason. This rumor was never substantiated. Each of the rumored potential competitors was interviewed by agents of the F.B.I. at the direction and under the supervision of counsel for the [fol. 2571] Government. Yet the Government called no witness from any of the companies. Its failure to do so at least suggests that it could find no one to corroborate its claim.

It is true that prior to the joint venture Pennsalt was of the opinion that the southeastern market could handle only one more significant producer; and both Pennsalt and Olin believed that by a prompt announcement on February 15, 1960 of the formation of Penn-Olin and its plans, the market might be preempted from other potential competi-

tors.[20] But this evidence will not support the conclusion that one or more other companies were probably deterred by Penn-Olin from going into business in the southeast, since there is no proof that any newcomer other than PPG was considering doing so and PPG decided to enter the market after Penn-Olin had been announced. The absence of entry by others, in itself, is not too meaningful, since even before the formation of Penn-Olin was announced there had been no newcomers in the sodium chlorate industry for a decade. Furthermore, whether the unidentified companies which the Government asserts were probably excluded from the market would have been as effective business rivals as Penn-Olin is to be doubted. The com- [fol. 2572] bined experience of Pennsalt and Olin in sodium chlorate far exceeded that of any other potential market entrant. AmPot and Hooker had a virtual monopoly in the southeast and a formidable opponent was required if substantial inroads upon their entrenched positions were to be made.

It cannot be held that as of the date of trial Penn-Olin probably deterred others from entering the field. What Penn-Olin's effect in the future may be upon would-be entrants can only be a matter of conjecture. Obviously, the number and strength of companies already in a market will have a bearing upon another's decision to enter it. But it is only one of a myriad of other factors which will control the decision. The imponderables are too great to hazard a forecast as to Penn-Olin's future deterrent affect, even on the basis of probabilities, which will have validity.

The Government makes the further argument that if Olin and Pennsalt had not determined to become partners via Penn-Olin, the probabilities are that both would have built a sodium chlorate plant somewhere in the southeast. Penn-Olin, the argument runs, thus prevented Pennsalt, an "actual" competitor, and Olin, a "potential" competitor,

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[20] Evidence of the intention of parties to a combination is an aid in predicting their probable future conduct and the probable effect of the combination. See *Brown Shoe Co.* v. *United States, supra,* p. 329, n. 48.

[fol. 2573] from independently competing in the southeast.[21]

The interest which Pennsalt had in building a sodium chlorate plant in the southeast was of long standing. Its 20-year operating experience at Portland had provided it with all requisite manufacturing know-how, and it was aware of the rapidly expanding market in the southeast. As early as 1951 it had cost studies made for a plant at Calvert City, Kentucky. From 1955 on the company gave almost continuous consideration to the establishment of a plant in the southeast. The record contains frequent expressions of optimism by Pennsalt personnel concerning the desirability of southeastern expansion. Yet no decision to proceed was ever arrived at. This was due primarily to the inability of the management to satisfy itself that the plant would be sufficiently profitable to meet the rate of return standard which it had established as a condition for new investments.

Olin's interest in manufacturing and selling sodium chlorate in the southeast for its own account likewise antedated the joint venture by a number of years. It realized that sodium chlorate would soon replace sodium chlorite as a [fol. 2574] raw material in the Mathieson process, and that the demand for sodium chlorate by pulp and paper mills in the southeast was rapidly expanding. It had extended experience in the technical aspects of bleaching pulp and paper. It possessed valuable contacts with the pulp and paper mills as a result of selling other chemicals to them, and having made available, without charge, the Mathieson process. This combination of circumstances led

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[21] An additional argument is that the practical effect of Penn-Olin was to bring about an allocation of markets between Olin and Pennsalt. Thus, it is said that the joint interest of the companies in Penn-Olin will necessarily prevent Pennsalt from competing from its Portland plant for business in the southeast, and has foreclosed Olin from competing for west coast business from the plant which, but for Penn-Olin, it would have built in the southeast. This argument assumes a national market of competitive effectiveness. The absence of such a market invalidates the argument.

Olin to actively consider the possibility of building a plant of its own in the southeast. To that end, it had studies made of plant location, power availability, sales potential, manufacturing techniques, construction costs, profitability, and other relevant factors. But Olin, like Pennsalt, never decided to go forward independently with the project. The primary difficulty encountered every time the project was analyzed seemed to be the generally unsatisfactory rate of return.

Paralleling in point of time the studies which Pennsalt and Olin were making concerning the feasibility of building their own plants were several years of sporadic discussions between them relating to the possibility of entering the southeastern market by means of a joint arrangement of some kind. The joint venture agreement was the culmination of these discussions. The possibility of individual entry into the southeastern market had not been completely [fol. 2575] rejected by either Pennsalt or Olin before they decided upon the joint venture.[22]

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[22] Osborne, the President of Penn-Olin, testified that Olin's decision to enter the joint venture was made without determining that Olin could not or would not be an independent competitor. He testified that that question "never reached the point of final decision."

Pennsalt asserts that on December 5, 1957 its management made its final decision that it should not build a plant of its own and that this decision was never reconsidered or changed. The view that the December 5, 1957 decision was final is rejected. The record is replete with evidence that after December 5, 1957 Pennsalt continued to manifest an interest in an independent sodium chlorate venture, although this was primarily in the posture of a combined sodium chlorate-ammonium perchlorate plant. The consideration which was given to the ammonium perchlorate aspect of the venture was basically to support the manufacture of sodium chlorate. Ammonium perchlorate was viewed as a "sweetener" to justify the investment economically, since ammonium perchlorate, as compared with sodium chlorate, yielded a relatively high rate of return on investment.

In December 1958 the management of Pennsalt agreed

At the time when the joint venture was agreed upon Pennsalt and Olin each had an extensive background in sodium chlorate. Pennsalt had years of experience in manufacturing and selling it. Although Olin had never been a commercial manufacturer, it possessed a substantially [fol. 2576] developed manufacturing technique of its own, and also had available to it a process developed by Vickers-Krebs with whom it had been negotiating to construct a plant. Olin had contacts among the southeastern pulp and paper mills which Pennsalt lacked, but Pennsalt's own estimates indicate that in a reasonable time it would develop adequate business to support a plant if it decided to build. A suitable location for a plant was available to each company—Calvert City, Kentucky for Pennsalt, and the TVA area around Chattanooga, Tennessee for Olin. The financing required would not have been a problem for either company. In short, when the joint venture agreement was signed, Pennsalt and Olin each possessed the resources and general capability needed to build its own plant in the southeast and to compete with Hooker and AmPot in that market. Each could have done so if it had wished. While neither company was able to satisfy itself with the rate of return potential of an individually owned plant, the forecasts of each company indicated that a plant could be oper- [fol. 2577] ated with profit.[23] From the standpoint of

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to launch a full-scale effort to determine the feasibility of a sodium chlorate-ammonium perchlorate plant. This effort was not made because in January 1959 Pennsalt resumed joint venture discussions with Olin. The January 1959 minutes of the Appropriation Committee of Pennsalt indicate that if Olin was not desirous of proceeding with the joint venture, data on doing the project alone should be resubmitted to the committee. As late as December 30, 1959, Land, General Manager, Industrial Chemicals Division East, was still of the view that no final decision had been made whether Pennsalt would build its own plant.

[23] For instance, the so-called Whither Report of the Chemical Division of Olin dated April 10, 1959 disclosed that if Olin built a 15,000 ton sodium chlorate plant at Mackintosh, Alabama, it could be expected to show a profit after taxes equal to 11% on the gross investment of

profitability, however, Pennsalt and Olin both believed that they could make more money on their investment and that the risks would be less if their business were carried on through a jointly owned plant rather than by means of plants individually owned.

The fact that Olin and Pennsalt each had the capability of building a plant and competing individually is of no controlling significance. It is important only as a factor in determining whether as a matter of probability *both* companies would have entered the market as individual competitors if Penn-Olin had not been formed.[24] Only in this event would potential competition between the two companies have been foreclosed by the joint venture. Whether or not as a matter of probability Pennsalt or Olin would have constructed a plant of its own in the absence of Penn-Olin, need not be decided, for the reasons hereinafter stated. [fol. 2578] No evidence exists which will support a finding that if Penn-Olin had not been created Pennsalt and Olin would have *simultaneously* determined to build their own plants. Not only the inherent improbability of this occurring, but the protracted study which each company gave to the problem without arriving at an affirmative decision, negates such a likelihood. So that the best possible postulate on which the Government's case can be based is that one

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$4,100,000. A revision of the Report in October 1959 revealed that if Olin constructed a combined sodium chlorate-chlorine-caustic plant at Chattanooga, Tennessee, the investment of $3,590,000 attributed to the 15,000 ton sodium chlorate facility would yield an after-tax profit of 13.1%.

A study made by Pennsalt in 1959 for a combined sodium chlorate-ammonium perchlorate plant at Calvert City, Kentucky showed that the $6,961,300 investment cost assigned to the 25,000 ton sodium chlorate phase would yield a 15.9% after-tax return. Although both companies made a number of studies of the potential profit to be derived from a sodium chlorate plant and the anticipated yield on investment was not uniform, each of the studies forecast a profit.

[24] Section 7 is not concerned with possibilities of competition being substantially lessened; its aim is directed against combinations that probably will have that result. *Brown Shoe Co.* v. *United States*, *supra*, p. 323.

company would have decided to build while the other continued to ponder.

The decision by one company to build, however, might have had a bearing upon the decision of the other. The considerations which might induce one company to build its own plant when Hooker and AmPot were the only competitors would not necessarily be the same if a third competitor were about to enter the market. Pennsalt and Olin were each hesitant to build a plant of its own in a market occupied by two competitors. Whether the imminent presence of a third competitor might have made the prospect more or less appealing cannot be foretold. Neither company had ever faced the problem. The record affords no clue as to what action might have been taken if the problem had arisen. It is therefore impossible to conclude that as a matter of reasonable probability *both* Pennsalt and Olin [fol. 2579] would have built plants in the southeast if Penn-Olin had not been created.

The most favorable assumption that can be made from the Government's standpoint is that either Pennsalt or Olin—but not both—would have entered the southeastern market as an independent competitor if the two companies had not agreed to consolidate their efforts through Penn-Olin. Upon this assumption the effect of Penn-Olin was to eliminate Pennsalt or Olin, as the case may be, as a competitor. But even this hypothesized situation affords no basis for concluding that Penn-Olin had the effect of substantially lessening competition. Whether or not it did depends upon the competitive impact which Penn-Olin will have as against that which might have resulted if Pennsalt or Olin had been an individual market entrant.

The Government argues that any such comparison is irrelevant and that a determination that Olin (or Pennsalt) would have built its own plant but for Penn-Olin automatically condemns the joint venture.[25] Such an interpreta-

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[25] The Transcript of Argument reads at pp. 125-126:

"The Court: Let me ask you: If I should come to the conclusion that as a matter of reasonable probability, absent the joint venture, Olin would have constructed a factory and sold its products in the southeast, if I

[fol. 2580] tion would cut cut the heart out of Section 7. The Section denounces a substantial "lessening" of competition. "Lessening" is a word of comparison. It demands that the competitive situation which the challenged transaction has brought about be compared with that which otherwise would have existed. Under the Sherman Act competitive conditions before and after a trade restraint must be examined to determine its reasonableness. *Board of Trade of the City of Chicago* v. *United States*, 246 U.S. 231, 238 (1918). A similar comparison is no less essential in determining whether a transaction otherwise within the reach of the Clayton Act will affect competition adversely. If Penn-Olin had the effect of keeping Pennsalt or Olin out [fol. 2581] of the southeastern market, it runs afoul of Section 7 only if competition generally in the southeast will probably be substantially less under the joint entry by Pennsalt and Olin *via* Penn-Olin than it would have been if there had been individually entry by either Olin or Pennsalt.

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should come to that conclusion, does the Government contend that from that the Government must . . . win?"

"Mr. Freed: Yes.

"The Court: Let me ask you: Isn't there a further question as to whether or not the construction of a plant by Olin, sales of products by Olin in the southeast, would have produced a more competitive situation than did the joint venture?

"Mr. Freed: No, Your Honor, that would not be a legitimate question. It is not for the Government and it is not for the courts to weigh the advantages of combinations of competitors and what they give to the economy, and what individual companies give to the economy. . . ."

In arguing that competition created by the joint venture is irrelevant, the Government cites *U. S.* v. *Minnesota Mining & Manufacturing Co.*, 92 F.Supp. 947 (D. Mass. 1950) as an "important precedent". If the decision is susceptible of the interpretation which the Government gives it, it is inconsistent with the views herein expressed. *United States* v. *Bethlehem Steel Corp.*, *supra*, pp. 615-618, the other case relied upon by the Government, is clearly inapposite.

In the classical horizontal combination case an appraisal of the competitive potential of each of the combining competitors can be made upon the basis of its prior record. Here there are no past records of Pennsalt or Olin that can be drawn upon to show their individual competitive effectiveness in the southeast, except those which pertain to the 1957-1960 period when Olin was acting temporarily as Pennsalt's sales agent. They established a market penetration by Pennsalt and Olin which was insignificant compared with that of Hooker and AmPot. What the competitive impact of Pennsalt or Olin might have been if either had owned its own plant in the southeast cannot be determined from the record. Nor does the record disclose the competitive effectiveness, in terms of percent of business obtained or otherwise, which Penn-Olin has made since it began business.

Solely as a matter of theory, however, no reason exists to suppose that Penn-Olin will be a less effective competitor than Pennsalt or Olin would have been. The contrary conclusion is the more reasonable. Penn-Olin should be able [fol. 2582] to bring to the southeast the aggregate contributions of both companies. After all, Penn-Olin is owned and managed by both Olin and Pennsalt. Whatever manufacturing or marketing techniques, new product usages or other advantageous operational procedures are known to Olin or Pennsalt can be expected to be brought to the attention of Penn-Olin and utilized by it. Neither Pennsalt or Olin has any reason to suppress information which will be of advantage to Penn-Olin. All three companies are in business to make money, and competitive effectiveness is essential to the achievement of this objective.

Before trial, the Government interviewed and corresponded with a number of chemical companies and sodium chlorate producers. In spite of this, no witness was called to testify that the vigor of competition in the sale of sodium chlorate had been, or is likely to be, lessened by Penn-Olin. Nor did the plaintiff introduce any testimony from purchasers of sodium chlorate who complained of any lessening of competition in the industry. Dirkson, Eastern General Sales Manager of AmPot, who called by the Government, testified that there had been no lessening in competi-

tion since the establishment of Penn-Olin and that he knew of no facts likely to lead to a lessening in the future.

[fol. 2583] It is not every lessening of competition which is forbidden by Section 7. The lessening of competition becomes a matter of legislative concern only if it is reduced to a substantial degree, that is to say to such an extent as will injuriously affect the public. *International Shoe Co.* v. *F.T.C.*, 280 U.S. 291, 298 (1930).

Prior to Penn-Olin building its plant at Calvert City, Kentucky, Hooker and AmPot had virtually a monopoly in the southeast. With Penn-Olin will be three competitors; and when the PPG plant at Lake Charles goes on stream, there will be four. Each of the newcomers is a sizeable company and should be able to give a good account of itself. Actual and in-prospect production in the southeast will have more than doubled since the joint venture was entered into, as shown by the following tabulation:

Company and Plant Location	Capacity in Tons 1959	Capacity in Tons Projected 1962
Hooker Columbus, Mississippi	29,150	32,000
AmPot Aberdeen, Mississippi	12,000	22,500
Penn-Olin Calvert City, Kentucky		26,500
PPG Lake Charles, Louisiana		15,000[26]
Total	41,150	96,000

[fol. 2584] The advent of Penn-Olin, and later PPG in the southeastern market, together with the increased production in that market, will in all likelihood increase the competition which theretofore existed and bring to buyers of sodium chlorate and to the public the benefits which normally result therefrom.

Congress, in amending Section 7 of the Clayton Act, recognized that all combinations were not anticompetitive, and that in some instances combinations may have the effect of stimulating competition. *Brown Shoe Co.* v. *United States, supra*, p. 319. The probabilities are that Penn-Olin will have that effect.

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[26] To be achieved gradually on a stepped-up basis.

The Government makes an additional argument founded upon two agreements between Olin and Pennsalt which antedated the joint venture. One, the sales agreement, was made in December 1957; the other, the so-called production agreement, was made in February 1958. It is asserted that the joint venture consummated and perpetuated the restraints in sodium chlorate imposed by the two earlier agreements which were in themselves illegal. For this reason, the argument goes, even if Penn-Olin might have been lawful as a spontaneous creation, its heritage of restraints under the earlier agreements requires its dissolution. *United States* v. *Yellow Cab Co.*, 332 U.S. 218, 227 (1947) is cited in support of this proposition.

[fol. 2585] As subsequently shown the sales agreement and production agreement were not in and of themselves in derogation of the Sherman Act. Nor, as has been previously shown, was the joint venture, considered independently of the prior agreements, in violation of Section 7 of the Clayton Act. The fact that the three transactions—the joint venture and the two agreements—each legal when considered independently, occurred sequentially and as a part of the totality of events, cannot make them, in combination, illegal. *United States* v. *Yellow Cab Co., supra,* is not at variance with this view.

It is the burden of the Government to establish that the joint venture probably will have the effect of substantially lessening competition or that it will tend to create a monopoly in sodium chlorate in the southeastern market. This burden has not been met. The joint venture agreement, in its sodium chlorate aspect, violated neither Section 1 of the Sherman Act or Section 7 of the Clayton Act.

The Affect of the Joint Venture on Competition in Calcium Hypochlorite

As stated, Pennsalt and Olin are substantial competitors, on a nationwide scale, in calcium hypochlorite, one of the non-chlorate chemicals. Together they had 88.8% of the market in 1959 and 76.6% in 1960. The only other competitor of importance is PPG.

[fol. 2586] The joint venture letter agreement of February 11, 1960 provides that Penn-Olin will manufacture and market not only sodium chlorate but potassium chlorate

and perchlorates as well. This agreement was superseded by the definitive contract of October 17, 1961 which limited the operation of the joint venture to sodium chlorate.[27] The Calvert City plant was constructed to produce sodium chlorate only. So that under its present contract and with its existing physical facilities, Penn-Olin cannot manufacture and sell calcium hypochlorate. It is not important that the breadth of the language of Penn-Olin's charter, frequently found in Delaware charters, authorizes it to do so. The Government concedes that it knows of no plans of the defendants to expand the Calvert City plant or to produce any product other than sodium chlorate.[28]

The Government asserts that in the operation of Penn-Olin high officials of Pennsalt and Olin who make the price and marketing and other pertinent decisions for their own companies will be interlocked with each other as officers and directors of Penn-Olin, and that the information concerning the chemical business which each brings to Penn-Olin's meetings will relate not only to their joint product, sodium [fol. 2587] chlorate, but also to non-chlorates, including calcium hypochlorite, in which they compete. Discussions which will ensue between the Pennsalt and Olin representatives in their common effort to make the sodium chlorate business a success, the Government argues, will inevitably lead to discussions of all phases of the non-chlorate business in which they are in competition, since chlorate and non-chlorate price policies, marketing areas, distribution systems and customers coincide or overlap. The Government asserts that in these circumstances it would "defy human nature" for the sodium chlorate partners to maintain an unfaltering zeal to compete in non-chlorates.

No evidence exists of collusion of any type, either actual or threatened, between defendants in the conduct of their non-chlorate operations. A finding of illegality in this area, if it is to be made, must rest upon an inference that a substantially lessening of competition between Pennsalt and Olin in non-chlorates will probably result because of the

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[27] Although this was after suit had been begun on January 6, 1961, Olin had determined internally in 1960 that the joint venture should be restricted to sodium chlorate.

[28] Transcript of Argument, p. 44.

opportunity which their representatives have to make anti-competitive agreements when they meet in connection with Penn-Olin's affairs. Such an inference is incompatible with the holding in *Maple Flooring Asso.* v. *United States*, 268 U.S. 563 (1925). There it was argued that a trade association consisting of hardwood flooring manufacturers in [fol. 2588] actual competition with each other which held meetings for the purpose of discussing and exchanging information about costs, commissions, freight rates, sales prices and other pertinent marketing data, would have the "*necessary* tendency" to unduly restrain competition in violation of Section 1 of the Sherman Act (p. 578). The Court held, however, that in the absence of proof that anti-competitive agreements or concerted action had been reached or attempted, there was no basis for inferring that the association meetings would result in a violation of the law (p. 586).

The probability of competition being substantially lessened by conduct specified in the antitrust statues need not be established by direct evidence. Inferences that competitive restrictions will probably result are judicially acceptable if supported by adequate evidence. Here the proof shows only an opportunity for illegal activities. That is not enough. To equate opportunity for wrongdoing with likelihood of its occurrence reflects a cynicism toward business behavior which is without warrant. Presumption of probable wrongdoing cannot be a substitute for its proof.

There is no basis for finding that the joint venture and the activities of the parties thereunder probably will substantially lessen competition or tend to create a monoply in calcium hypochlorite in violation of Section 1 of the Sherman Act or Section 7 of the Clayton Act.

[fol. 2589] The Asserted Illegality of Sales and Production Agreements

The Government challenges two agreements entered into by Olin and Pennsalt in December 1957 and February 1958, referred to, respectively, as the "sales" agreement and the "production" agreement. The Government contends that these agreements, in and of themselves and without refer-

ence to the joint venture, unreasonably restrained trade in violation of Section 1 of the Sherman Act.[28]

The relevant line of commerce is sodium chlorate. Although the evidence does not permit a statistical market analysis for 1957 and 1958 comparable to that previously made for 1960, there is no reason to believe that the situation was substantially different in the three years. Hence the southeast will be deemed to be the only relevant market in which to determine the competitive effect of the 1957 and 1958 agreements.

The Sales Agreement

The sales agreement had this background: In October 1957 the productive capacity of Pennsalt at its Portland plant was expanded from 7,848 to 12,392 tons. This enabled it to produce some tonnage which it could not sell on the west coast. At the time Pennsalt was desirous of exploring with Olin the possibility of a sodium chlorate joint venture [fol. 2590] in the southeast. Distribution by Olin of Pennsalt's production would permit the southeastern market to be jointly tested and enable Pennsalt to work off some of its surplus. Pennsalt thought that such a temporary arrangement might serve to stimulate Olin's interest in a joint venture. This combination of circumstances caused Pennsalt to initiate discussions with Olin which in December 1957 culminated in the agreement.

The agreement provided in substance that Pennsalt would make available to Olin's southern sales organization 2,000 tons of bulk sodium chlorate per year to be sold at prices established by local competition. Olin agreed to sell this sodium chlorate in bulk only to pulp and paper mills in the southeast. Pennsalt agreed to provide technical service upon Olin's request. Pennsalt reserved the right to serve directly only one southeastern pulp mill, Buckeye Cellulose Company at Foley, Florida. The agreement was on a year-to-year basis, but the parties expected it would last for two or three years. The sales agreement was adhered to from the time when it was made until the joint venture agreement was signed.

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[28] Transcript Argument, p. 54.

The effect of the sales agreement was to preclude Olin from selling sodium chlorate manufactured by Pennsalt to anyone anywhere except pulp and paper mills in the southeast. Concurrently, it precluded Pennsalt from selling directly to the pulp and paper companies in the southeast, [fol. 2591] except Buckeye. This "territorial division" and "customer allocation", the Government asserts, foreclosed competition between Pennsalt and Olin in substantial geographical areas and consumer uses.

While the Government does not say so in so many words, it apparently takes the position that the territorial and customer restrictions imposed by the agreement constitute *per se* violations of the Sherman Act. It has recently been held, however, that a vertical arrangement by a manufacturer and a dealer-distributor restricting the right of the latter to sell only in specified territories and to designated customers cannot be deemed, as yet, to be a *per se* violation. *White Motor Company* v. *United States*, No. 54 October Term, 1962, 31 U.S.L.W. 4231 (Mar. 4, 1963). This principle, now definitively settled, would appear to have even greater application in the instant case where the arrangement was between a manufacturer and its sales agent.

The Government argues that the sales agreement was not comparable to an arrangement between a manufacturer and distributor, such as was considered in *White Motors*. Rather, says the Government, the Pennsalt-Olin agreement was one between potential competitors since Pennsalt was an actual competitor in sodium chlorate and Olin was considering going into the same business.[30]

[fol. 2592] The principle that a horizontal market division between competitors is a *per se* violation of the Sherman Act rests upon the premise that all such agreements impose naked restraints on trade and have no purpose except to stifle competition. Because of their pernicious effect on competition and lack of any redeeming virtue, they are conclusively presumed to be unreasonable and therefore illegal without elaborate inquiry as to the precise harm they have caused or the business excuse for their use. *White Motor Company* v. *United States, supra.*

Thus far this principle appears to have been limited to

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[30] Transcript of Argument, pp. 55-57.

agreements between parties which are actual competitors. The Government admits that it knows of no instance where it has been brought to bear upon potential competitors."[21] Whether it can be applied in the instant case requires consideration *in limine* of the extent to which Olin and Pennsalt were potentially competitive.

The concept of potential competition is, to say the least, a flexible one, and is subject to almost unlimited gradations in meaning. The degree of likelihood of competition may cover a broad range. In point of time its prospect may be remote or imminent. Involved may be companies which are financially weak or strong or both. The problem may con- [fol. 2593] cern companies with experience in manufacturing and selling the same product in other relevant markets or companies which are newcomers to the industry. The potential market may be one occupied by other competitors, or one ripe for exploitation because of the absence of competition. A whole gamit of other environmental factors may be envisioned which will bear upon the significance of the so-called potential to compete. Only if the "potential competition" is analyzed and defined in the light of the evidence can the concept be meaningful in the solution of an antitrust problem. To simply describe companies as potential competitors is not enough.

Here, although Pennsalt had a plant in Portland since 1941, it had never been able to develop any business of significance in the southeast. In its agreement with Olin it reserved the right to sell to only one customer, Buckeye. Pennsalt was able to retain the business of Buckeye only because of a unique circumstance which gave to Buckeye a particular freight advantage in receiving shipments from the west coast. The insignificance of Pennsalt as a competitive shipper from Portland to the southeast in 1960 has been discussed earlier in this opinion. The record is devoid of evidence to permit comparable analysis for 1957; but it does show that in 1957 Pennsalt shipped into the southeastern market only 597 tons. There is no reason to suppose [fol. 2594] that in 1957 Pennsalt was a more vital competitive factor in the southeast than it was in 1960.

So far as Olin is concerned, at the time when it entered

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[21] Transcript of Argument, p. 57.

into the agreement, it had never manufactured sodium chlorate for sale or sold it anywhere. Although it was studying the desirability of going into the business no decision to do so had been made.

In short, when the sales agreement was made, both Pennsalt and Olin were far removed from the point of becoming actual competitors in the southeastern market, or anywhere else. To say that they were potential competitors stretches the concept to the point where, in an antitrust context, it is virtually meaningless. Their relationship provides no basis for applying the *per se* violation rule applicable to actual competitors who agree to divide territories and customers between themselves.

So that whether the sales agreement is scrutinized simply as a contract between a manufacturer and his sales agent, analogous to the manufacturer-distributor-dealer relationship dealt with in *White Motors*, or is examined with emphasis upon the status of the parties as potential competitors, the "rule of reason" read into the Sherman Act by *Standard Oil Co.* v. *United States*, 221 U.S. 1, 59-62 (1911) must be applied, and the evidence examined to ascertain [fol. 2595] whether the restraint of trade which the sales agreement is said to have imposed, was unreasonable.

The sales agreement did not impose the severe territorial or customer limitations which the Government claims. It did not preclude Olin from manufacturing sodium chlorate or from purchasing it from Pennsalt's competitors; and if Olin did either it was free to sell the product to anybody outside of the southeast, and to anybody in the southeast other than pulp or paper mills.

The agreement did not prevent Pennsalt from selling sodium chlorate to anyone in the United States, except pulp and paper mills in the southeast. All that it did was to prevent Pennsalt from selling through its own personnel sodium chlorate to pulp and paper mills in the southeast. Even as to the latter business Pennsalt competed through the instrumentality of Olin, much as AmPot did through the Solvay Division of Allied Chemical.

The business which Olin was able to generate was not large. The sales which it made under the agreement in 1958 amounted to 1,113 tons, and in 1959 to 1,329 tons. In

1960, after Pennsalt and Olin had agreed to form Penn-Olin, 3,203 tons were sold. Olin enjoyed contacts and good will with the buyers which Pennsalt lacked. The probabilities are [fol. 2596] that Pennsalt was able to compete more effectively through Olin than it could have without Olin's assistance. In 1960, the year of its largest southeastern shipments, and with Olin's help, Pennsalt was only able to supply 9% of the total 47,035.76 tons shipped into the market. Of the remaining amount, Hooker and AmPot together supplied 91%. Even if the sales agreement be regarded as eliminating Pennsalt from competing for the business of the southeastern pulp and paper manufacturers, the exclusionary effect of the agreement was not substantial.

So far as a Sherman Act violation is concerned, the result must turn on the significance of the business practices in the terms of restraint of trade. *United States* v. *Masonite Corporation*, 316 U.S. 265, 280 (1942). The sales agreement imposed no unreasonable restraint of trade upon sodium chlorate in the southeast, and did not violate Section 1 of the Sherman Act.

[fol. 2597] The Production Agreement

The second pre-joint venture agreement which the Government attacks is the so-called "production agreement" entered into on February 3, 1958. This is reflected in the memorandum written the following day by Mr. Logan, Vice President of Olin. There he details a visit which he had the preceding day with top officials of Pennsalt. The memorandum states:

> "Drake (Pennsalt's president) outlined their long-range interest in chlorate in the south and suggested that there was sufficient that both Pennsalt and OM had to contribute to seriously consider joint activity.
>
> . . . . . .
>
> "It is felt that neither OM nor Pennsalt should move in the chlorate or perchlorate field without keeping the other party informed and I agreed to do so.
>
> . . . . . .

"Either party is to bring to the attention of the other any unusual aspects of this business which might make it desirable to proceed further with production plans."

There is no justification for the claim that this agreement destroyed all opportunities for competition between Pennsalt and Olin and that plans for independent eastern production by each company were thereby thwarted. This was neither the intention nor the effect of the agreement. [fol. 2598] Its purpose, according to Drake, was to make certain that if one party decided to "go it alone" while the joint venture was under consideration, the other party would be so advised since it would be futile for the latter to give further consideration to the joint venture. That the agreement was not designed to curtail individual market entry or to thwart plans therefor is borne out by activities of the parties after the understanding had been reached.

In September 1958—seven months after the agreement—the agenda for Pennsalt's annual management meeting raised for firm decision the question whether it would build a sodium chlorate plant, and if so, where. At the meeting held in November 1958, tentative approval was reached to build a 30,000 ton sodium chlorate plant at Calvert City, Kentucky, 20,000 tons of which would be sold as such and 10,000 tons of which would be devoted to the production of ammonium perchlorate.[32] The action taken was based upon a study of the capital requirements and profitability of the venture reflected in a report of October 31, 1958 from A. S. Woodard, manager of engineering, to Vice President LaLande. The purpose of Pennsalt in going into perchlorates was to enable Pennsalt independently to undertake [fol. 2599] the manufacture of sodium chlorate. Pennsalt's interest in a plant of its own continued throughout 1958.

So far as Olin is concerned, the record is replete with

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[32] Ammonium perchlorate is used as an oxidizer for high energy solid state missile propellants. Sodium chlorate is the raw material out of which ammonium perchlorate is made. The profit obtainable from the latter was much greater than that which could be derived from the former. A plant which produced both products would yield an overall rate of return satisfactory to Pennsalt.

evidence that its interest in building a sodium chlorate plant of its own was not terminated by the production agreement. Illustrative is the so-called Whither report of the Chemicals Division which was made on April 10, 1959. This recommended that Olin enter the sodium chlorate business immediately by constructing a 15,000 ton sodium chlorate plant adjacent to its existing chlorine-caustic soda plant at Mackintosh, Alabama. At a meeting on April 16, 1959 between representatives of the Chemicals Division and corporate staff, the proposed Mackintosh project was not deemed sufficiently attractive to be approved. The matter was not dropped, but it was determined that there should be further study on certain specified points. In October 1959 the Chemicals Division filed another Whither report which made a definitive recommendation that sodium chlorate be a wholly Olin project but that the plant be located at Chattanooga instead of Mackintosh. Olin's corporate staff did not disapprove or otherwise act upon the October 1959 report prior to the joint venture decision of 1960.

[fol. 2600] In view of this evidence it is impossible to attribute to the production agreement the stultifying *effect* on individual competition by Olin and Pennsalt which the Government would ascribe to it. The agreement did not constitute an unreasonable restraint of trade in violation of Section 1 of the Sherman Act.

A judgment will be entered dismissing the complaint as amended.

The foregoing opinion constitutes the findings of fact and conclusions of law required by F.R.C.P. 52(a).

At: Wilmington, Delaware.
Date: May 1, 1963.

[fol. 2601] IN UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Civil Action No. 2282

[Title omitted]

ORDER ENTERING JUDGMENT—May 15, 1963

And now this 15 day of May, 1963, this case having come on for final hearing on the merits, and having been fully heard upon oral testimony, depositions, exhibits, and argument of counsel for the respective parties, and having been maturely considered by the Court, and Findings of Fact and Conclusions of Law having been filed, it is, for the reasons set forth in the opinion of this Court dated May 1, 1963:

Ordered that judgment be and it hereby is entered in favor of each of the defendants and against the plaintiff.

Edwin D. Steel, Jr., United States District Judge.

Approved as to form:

David J. Freed, Attorney for Plaintiff.

[fol. 2602] [File endorsement omitted.]

[fol. 2603] IN UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Civil Action No. 2282

[Title omitted]

NOTICE OF APPEAL TO THE SUPREME COURT OF THE UNITED STATES—Filed July 15, 1963

I. Notice is hereby given that the United States of America, the plaintiff above named, hereby appeals to the Supreme Court of the United States from the final judgment entered in this action on May 15, 1963 dismissing this suit. This appeal is taken pursuant to Section 2 of the Expediting Act, 32 Stat. 823, as amended, 15 U.S.C. 29.

II. The Clerk will please prepare a transcript of the record in this cause for transmission to the Clerk of the Supreme Court of the United States, and include therein the entire record before the district court, including all papers filed with the Clerk of the Court in this proceeding, the transcript of the trial proceedings, all exhibits and proposed findings submitted by the parties, and this Notice of Appeal.

III. The question presented by this appeal is whether the joint venture of Pennsalt Chemicals Corporation and Olin-Mathieson Chemical Corporation in the production and sale of sodium chlorate violated Section 7 of the Clayton Act and Section 1 of the Sherman Act.

/s/Alexander Greenfeld, United States Attorney, Wilmington, Delaware.

/s/ Robert B. Hummel, /s/ Lionel Kestenbaum, Attorneys, Department of Justice, Washington, D. C. 20530.

[fol. 2604] CERTIFICATE OF SERVICE (omitted in printing.)

[fol. 2605] [File endorsement omitted.]

[fol. 2606] IN UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE

Civil Action No. 2282

UNITED STATES OF AMERICA, Plaintiff,

v.

PENN-OLIN CHEMICAL COMPANY, ET AL., Defendants.

ORDER EXTENDING TIME TO DOCKET CASE—September 9, 1963

Upon motion of the United States in the above captioned case it is hereby ordered that the time for docketing this case on appeal in the Supreme Court of the United States shall be extended for a period of 14 days until September 27, 1963.

/s/ Edwin D. Steel, Jr., United States District Judge.

Dated: September 9, 1963.

[fol. 2607] Clerk's Certificate to foregoing paper omitted in printing.

[fol. 2608] SUPREME COURT OF THE UNITED STATES, OCTOBER TERM, 1963

No. 503

UNITED STATES, Appellant,

vs.

PENN-OLIN CHEMICAL COMPANY, ET AL.

ORDER NOTING PROBABLE JURISDICTION—December 9, 1963

Appeal from the United State District Court for the District of Delaware.

The statement of jurisdiction in this case having been submitted and considered by the Court, probable jurisdiction is noted.

☆ U. S. GOVERNMENT PRINTING OFFICE 1964 719556 892